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M E D I C A L C O M M E N T A R I E S

FOR THE YEAR M.DCC.XCV.

EXHIBITING A CONCISE VIEW

OF THE

LATEST AND MOST IMPORTANT DISCOVERIES

I N

MEDICINE AND MEDICAL PHILOSOPHY,

COLLECTED AND PUBLISHED BY

ANDREW DUNCAN, M.D.F.R. & A.SS. ED.

PHYSICIAN TO HIS ROYAL HIGHNESS THE PRINCE OF WALES
FOR SCOTLAND,

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IN THE UNIVERSITY OF EDINBURGH.

Neglecta reducit, sparsa colligit, utilia feligit, necessaria ostendit, sic utile.
BAGLIVIVS.

DECADE SECOND.

V O L. X.

EDINBURGH:

PRINTED FOR G. MUDIE & SON, SOUTH BRIDGE; AND FOR
G. G. & J. ROBINSON, LONDON.

1795.



TO

DR. MAXWELL GARTHSHORE,

OF LONDON,

F.R.S. &c.

AS A TESTIMONY OF ESTEEM,

FOR INDEFATIGABLE ZEAL AND INDUSTRY,

BOTH IN THE PURSUITS OF SCIENCE,

AND IN THE

PRACTICE OF BENEVOLENCE,

THIS VOLUME OF

MEDICAL COMMENTARIES

IS INSCRIBED,

BY HIS SINCERE ADMIRER AND FRIEND,

ANDREW DUNCAN.

*Vivet extento Proculeius ævo
Notus in fratres animi paterni.*

HORATIUS.

P R E F A C E.

THE volume now presented to the Public completes the Second Decade of Medical Commentaries. And I have no inconsiderable satisfaction in reflecting, that I have brought to a conclusion the twentieth volume of this periodical work with so few interruptions. I trust, that although the present may not be justly entitled to all the approbation which partial friends have bestowed on former volumes of these Commentaries, it will yet be considered as meriting a careful perusal from those candid practitioners, who wish to be acquainted with proposed improvements for the alleviation of

A 3 disease,

disease, although their unavoidable engagements do not admit of extensive reading. Both in the analysis, which is here given, of books lately published, and in the original observations which this volume contains, many particulars will be found immediately connected with successful practice, which, in my opinion, well deserve a serious consideration.

THE general Alphabetical Table of Contents, with which the present volume is concluded, may be considered as the termination of this work. But, in putting a period to it, I may also take the opportunity of announcing my intention of commencing a similar annual work, upon nearly the same plan, although under a title somewhat different. And I hope I shall be enabled to conduct it with some advantages which I have not hitherto enjoyed.

It is my intention to publish, at the commencement of every year, a volume under the title of ANNALS OF MEDICINE, containing what to me appear to be the most important recent discoveries in the practice of the healing art. In the conduct of this work, I flatter myself with the hopes, that I shall receive no inconsiderable aid from my son, whom I soon expect to return from the continent of Europe, where he has been for some time engaged prosecuting the study of medicine.— From the acquaintance which he has formed with eminent physicians at different universities abroad, I trust I shall be furnished with more early and more accurate accounts of foreign medical publications of merit, than I have hitherto been able to obtain.

With respect to original communications, I have no doubt, that the practitioners of the present period will be as

accurate in marking important facts, and as liberal in imparting them to the public, as any of their predecessors. I hope, therefore, that my future volumes shall not want that value which may be derived from important observations, which have not before been published. Those who propose to favour me with their assistance in this way, and who have not a proper opportunity of transmitting their papers to Edinburgh, may address them to the care of my friend Dr. George Pearson, physician, Leicester Square, London. All observations transmitted to him for the *Annals of Medicine*, by those who may incline to employ this channel for communicating to others facts which have been instructive to themselves, will be carefully forwarded to their most obedient servant,

ANDREW DUNCAN

EDINBURGH, }
Dec. 1. 1795. }

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MEDICAL
COMMENTARIES,

FOR THE YEAR 1795.

VOL. X. DECADE II.

S E C T. I.

Account of New Books.

I.

An Inquiry into the Medical Efficacy of a New Species of Peruvian Bark, lately imported into this Country under the name of Yellow Bark, including Practical Observations respecting the choice of Bark in general. By John Relph, M. D. Physician to Guy's Hospital. 8vo. London.

PERUVIAN BARK, as Dr. Relph remarks, has been long and deservedly regarded as a medicine of the first estimation; and it is so extensively employed, that the quantity

VOL. X. DEC. II. B imported

imported into Britain for several years prior to the present publication, exceeded one hundred thousand pound weight annually.

The trees, from which the Peruvian, or as it is, by some, more properly named, the Cinchona Bark, is collected, are now known to be of various species; and Dr. Relph begins the present inquiry with some observations respecting these. He tells us that no botanical history of the *Arbor Febrifuga Peruviana*, or *Cinchona Officinalis*, as it is now called, is to be found worthy of attention before 1730, although the bark had been brought to Spain near a century before. He presents us with the accounts given of it by Mr. Arnot, *Monf. de la Condamine*, and *Dr. Joseph de Jussieu*.

After a short view of these original authorities, to which the knowledge of the Cinchona was long confined, he next examines the further information which has been obtained by the rapid extension of scientific botany, and he here presents us with the following description and arrangement of the different species given by *Professor Vahl* in the transactions of the *Natural History Society at Copenhagen*.

1st. *Cinchona*

1st. *Cinchona officinalis*.

Cinchona foliis lanceolatis glabris,
capsulis oblongis.

2^d. *Cinchona pubescens*.

C. foliis ovatis basi elongatis, subtus
pubescentibus capsulis cylindricis.

3^d. *Cinchona macrocarpa*.

C. foliis oblongis, subtus pubescen-
tibus costatis.

4th. *Cinchona caribæa*.

C. pedunculis axillaribus unifloris.

5th. *Cinchona corymbifera*.

C. foliis oblongo-lanceolatis, corymbis
axillaribus.

6th. *Cinchona lineata*.

C. panicula terminali, foliis ovatis,
acuminatis glabris, capsulis penta-
gonis.

7th. *Cinchona floribunda*.

C. panicula terminali, capsulis tur-
binatis levibus, foliis ellipticis acu-
minatis.

8th. *Cinchona brachycarpa*.

C. panicula terminali, capsulis obo-
vatis costatis, foliis ellipticis obtusis.

9th. *Cinchona angustifolia*.

C. panicula terminali, capsulis oblongis pentagonis, foliis lineari-lanceolatis pubescentibus.

After some remarks on each of these species, Dr. Relph concludes that it must be a task of the utmost difficulty to refer the different Peruvian barks now employed, to one or other of the species above-mentioned; and he thinks there is room for well-founded hope, that some species of *Cinchona* may yet be discovered of more advantage to medicine than any that has hitherto been employed.

To this consideration Dr. Relph has been led from having of late used a species of Peruvian bark; which, till very lately, has been unknown in this country, and which, from the trials made with it, promises to surpass in efficacy all the others at present used for the purposes of medicine.

This is now known in London by the name of the Yellow Bark. It is different from the yellow kind noticed by Arrot and Condamine, but is accurately described by Professor Murray in his *Apparatus Medicaminum*, where he gives the following account of it: It consists, according to him, of
flattish

flattish pieces of about the length of a finger, the breadth of the thumb, and a line in thickness. Its colour is yellow, inclining to that of the rust of iron. It partakes more of the ferruginous colour on its external, than on its internal surface, owing to the close adhesion of the epidermis to the bark. Both in its fracture, and on the surface, it appears fibrillous, breaking so easily between the fingers, that it may be rubbed into a yellow powder. Its taste is intensely bitter, with a slight degree of astringency.

This bark, Dr. Relph observes, though denominated yellow, is only to be understood as approaching nearer to that colour than any other species of Peruvian bark, imported into this country, especially when reduced to powder. The yellow bark, sold in London, corresponds, he tells us, so exactly with the description given by Professor Murray, that there can be no doubt of their being of the same species.

On the the authority of a letter from a drug-merchant in Cadiz, Dr. Relph concludes, that the yellow Peruvian bark-tree grows in the interior parts of Spanish Ame-

rica, in a mountainous country, and at such a distance from Lima, that the expence of conveying it thither must be very considerable.

After finishing his observations on the external characters of this bark, Dr. Relph next proceeds on the experimental part of his inquiry. These experiments, he tells us, were projected and entirely conducted by Mr. Babington, a gentleman of whose accuracy and fidelity no doubt can arise; and they are related by Dr. Relph in Mr. Babington's own words.

The decoction of yellow bark, according to Mr. Babington, if made in the same proportion with the Decoctum Cinchonæ of the London Pharmacopœia, so much resembles it, that it is difficult by the eye to distinguish the one from the other. But in almost every particular, excepting with regard to flavour, the decoction of the yellow bark is superior, not only to the common, but even to the foundest and most genuine red bark. The decoction of yellow bark, diluted with twice the quantity of water, was fully as bitter as the decoction of the best common bark. The
difference

difference is also remarkable in the astringency of the decoctions, when the yellow, the common, and the red, are compared. If a solution of vitriolated iron be added to equal quantities of these, till no further decomposition ensue, there will be produced in the first a darker and much more copious precipitation than in either of the other two; and when a pint of each was set by in common quart bottles, it was found that the mouldiness and acidity observable in the common in three, and in the red at the end of six weeks, had not taken place in the yellow for nearly two months.

We are next presented with an account of some trials made with the yellow bark in the way of infusion, both in hot and in cold water. The powder of this bark, macerated in common water, communicates to it the properties of a weak decoction. If, instead of being macerated with hot water, the powder be either triturated with cold water, or infused in it for the space of twenty-four hours, the liquor receives a very strong impregnation, not so much from the astringency, as from the pure and intense bitter-

ness of the subject. The circumstances which here, in a particular manner, engaged Mr. Babington's attention, were the predominancy of its bitterness when compared with other barks, and the determined fixity with which it seems attached. These are such, that he is even doubtful whether it be possible, by an aqueous menstruum, to extract all its bitterness, without the assistance of heat. He took five pounds of the finest powder of this bark, and at the end of eleven days, when he had used above one hundred gallons of water, he found the powder was so far from being insipid, that it was still as bitter as the common powdered bark of the shops. The water, in which the bark had been infused, on being filtered and evaporated by the heat of a water bath, yielded fifteen ounces of extract of a dark brown colour and pilular consistence, extremely bitter, and possessing a certain degree of transparency.

From the same procedure as is directed by the College of Physicians of London, with respect to common bark, the powder of yellow bark produces a tincture differing very little

little from the common in colour and transparency, but far surpassing it in bitterness and astringency : and in both these properties it surpasses even the tincture of red bark. Mr. Babington found that the proportional weight of these tinctures were as follows :

Tincture of yellow bark 918

———— common bark 912

———— red bark $911\frac{1}{4}$

Upon evaporating a pint of each of these tinctures in a water bath, the first yielded 311, the second 210, and the third only 201 grains of solid residuum.

Mr. Babington concludes his observations on the pharmaceutic treatment of yellow bark, with some remarks on the aqueous and spirituous extracts. The London College order two kinds of extract of common bark. The one is made by boiling in repeated portions of water, straining the decoction whilst hot, and evaporating them to a proper consistence. The other by digesting first in rectified spirit, and then making a decoction of the residuary matter in water, and uniting the products after each liquor has been separately evaporated. According to the first process Mr.
Babington

Babington tells us, that ten pounds of the yellow bark, yielded four pounds and two ounces of extract of a pilular consistence. Ten pounds of red bark, yielded four pounds one ounce of extract, and ten pounds of common bark yielded but two pounds nine ounces. The extract of common bark appeared to be the smoothest and most plastic, the red the most brittle; and the yellow of a lighter colour than either of the others, and far more powerful in taste.

Of the resinous extracts the products are also different. By the use of both water and spirit, a pound of common bark yields only two ounces three-fifths, a pound of red bark two ounces six-eighths, and a pound of yellow bark no less than four ounces of this extract. The resinous extract of the yellow bark is rather of a lighter colour than the aqueous. It has likewise a certain degree of transparency, but in its other properties there is no remarkable difference.

Mr. Babington thinks that the purest and most elegant extract is not to be obtained from this bark by either of the foregoing processes. What appears to him preferable,
is

is to digest it first in rectified spirit, which he considers as the most perfect menstruum; and after filtering the tincture, to distil off the spirit in a balneum. By this simple method, whatever be the virtues of the bark, the extract, he thinks, must of necessity contain them. For, on the one hand, the bark is rendered completely inert, and on the other, the spirit is brought over without the slightest trace of impregnation. Three ounces of this spirituous tincture are obtained from twelve of the bark; and although it be exceedingly powerful, both as to its bitterness and astringency, yet it possesses a peculiarity of flavour to many by no means unpleasant.

From the account here given of the natural and chemical properties of the yellow Peruvian bark, Dr. Relph infers, that every impartial reader must be convinced that it promises to be of important use to the medical practitioner; as a chemical investigation has proved it to contain a greater proportion of efficient and soluble matter, than the best pale or even red bark now in use. Without pretending to enter into any account of the the *modus operandi* of Peruvian bark, Dr.

Relph

Relph contents himself with considering the yellow bark as only possessing the medical powers of common bark in a greater degree. He observes that the power of Peruvian bark, by which it stops the recurrence of febrile paroxysms, first established its importance. And he assures us, that from the general and successful experience which he has had with the yellow bark, in many inveterate agues, it will seldom, if ever, be found necessary in such cases to employ any other febrifuge.

Although intermittents do not frequently originate in London, yet many patients, in every state and type of intermittent fever, from the labourers employed at the harvests in the fenny parts of Essex, and the hop-gatherers in Kent, annually come into Guy's Hospital. And it has been found, not only in Dr. Relph's own practice, but in that likewise of his colleagues, Dr. Saunders and Dr. Hervey, that the yellow bark has been invariably successful in combating these fevers.

Dr. Relph has repeatedly prescribed this bark in the various forms of powder, decoction and extract, on each of which he offers some observations.

Bark

Bark, in powder, is justly considered as the most efficacious form in which it can be administered. Half a dram of the yellow bark, given in this state, every two hours, has manifested, in general, nearly a double proportion of febrifuge power, to that of the common bark, which required to be given in doses of a dram every two hours, for subduing intermittents.

The bitterness of the yellow bark, though excessive, is not of the nauseous kind, and has, in many instances, proved more acceptable to weak dyspeptic stomachs, than an equal quantity of common bark.

In some conditions of the stomach, the powder of none of the species of bark can be taken in such doses as many intermittents require. The decoction of yellow bark, though strongly impregnated with the sapid principles of the drug, has not been found more disagreeable to the organs of digestion, than that prepared from the common bark. Dr. Relph has never observed that the decoction of yellow bark was complained of as unpleasant, by those who took it, even when they employed a quart of it, between the
hours

hours of breakfast and dinner ; while his experience enables him to say, that most intermittents may be completely cured by this decoction, and that it will be found an effectual and pleasant substitute for the powder. But where he was particularly solicitous to avert a subsequent paroxysm, he has commonly directed ten grains of the powder to be added to an ounce and a half of the decoction, and by giving this every two hours, he has never been disappointed in preventing the return of the disorder.

In typhus, and other continued fevers, the decoction of the yellow bark has also been successfully employed ; and to these, Dr. Relph observes, he may also add acute rheumatism. For, though this last disease be manifestly of the inflammatory kind, yet he remarks, that a remission of the symptoms generally takes place to a degree more or less evident in the course of every diurnal revolution. In such cases he has no hesitation in saying, that, notwithstanding the siziness of the blood, and the continuance of the inflammatory symptoms, bark may be safely and efficaciously employed : And in such circumstances

cumstances he has had recourse to the frequent and free exhibition of the yellow bark. For the use of the bark, in rheumatism, Dr. Relph acknowledges himself to be indebted to Dr. Saunders, who has employed it with great success for many years; and who frequently orders the bark to be accompanied with both general and topical blood-letting.

In Scarlatina, Erysipelas, and all the common disorders, either acute or chronic, requiring Peruvian bark, Dr. Relph has had much experience of this new species, especially in the form of decoction; and he is fully convinced, that, on every consideration, it should supersede all the other kinds of the Cinchona, now in use.

To Dr. Relph's observations are subjoined, letters from different medical practitioners, particularly from Doctors Woodville and Lind, Messrs. Jones, Gaitkell, James, and others, confirming the superior efficacy of this species of bark; and recommending its being adopted in practice, to the total exclusion of other barks.

II.

An Essay on the Rhus Toxicodendron, Pubescent Poison Oak or Sumach, with Cases shewing its Efficacy in the Cure of Paralysis, and other Diseases of extreme Debility. By John Alderfon, M. D. 8vo. Hull.

IN the Essay before us the author tells us that his only wish is to announce a remedy which he conceives will prove a benefit to the public, by alleviating some of the most distressing disorders that are incident to the human frame. Without attempting to account for the *modus operandi* of the plant, which is the subject of the present essay, he means simply to relate what has taken place under his own observation.

His first acquaintance with the article of which he here treats, began, he informs us, about four years ago, while he was examining the plants in the nursery-grounds at Cottingham. The proprietor then mentioned to him many wonderful effects of the poison-oak;

oak ; that if touched, by the fingers, the acrimony which it imparts, if not immediately washed off, would be retained for a long time ; that where the virulence of the deleterious particles continues unimpaired, a swelling and troublesome itching would come on, and continue for some time ; and that some of his men had even suffered so much, as to lose, by sphacelation, such parts of the skin, as the acrid juice had touched.

From these circumstances he was determined to make some further inquiry into its powers. And soon afterwards he became acquainted with some experiments made in France, by Mons. Fresnoi, with the *Rhus Radicans*, to which this plant is nearly allied. From these it appeared that he had employed, with success, the distilled water and extract of that plant, in cases of paralysis of the lower extremities. This information induced Dr. Alderson to hope that the Sumach might be exhibited with equal advantage in similar complaints. And the trials which he has made, in actual practice, tend to confirm this conjecture.

Dr. Alderson first presents the reader with an account of the different names affixed to this plant, and the descriptions given of it by the most eminent botanical writers. After an accurate description of the plant, illustrated by an elegant engraving, he observes, that although the *Rhus Toxicodendron* be a native of America, it has been introduced into England ever since the year 1640. And what Dr. Alderson has represented in the plate here given, and has employed in practice, were the luxuriant produce of young plants, growing in the strong moist loam of a Yorkshire nursery.

To enable the reader to judge of its power, as a medicine, he next gives a short account of the cases in which it has been employed. The first case here related is that of Mrs. B. the wife of an eminent surgeon: After having been repeatedly subjected to distressing symptoms, from constipation, in the year 1789 she had two fits, which Dr. Alderson believed were epileptic. In the month of September she was seized with pains in her hands and feet, which were supposed to be gouty; and when these went off, she lost entirely

tirely the use of the extensor muscles of the wrists, and soon after those of the feet, which was followed by the loss of the extensors of the fingers and toes. A tumour now rose on the metacarpal bones of each hand, which seemed a swelling either of the periosteum or bone itself, and had much the appearance of a scrophulous affection. The tumours, sometimes, seemed likely to suppurate; but, about the end of the year 1790, they gradually disappeared. The hands now looked livid, and the extensor muscles, upon the arms and hands, wasted and shrivelled. Her feet felt like logs of wood, and the fingers and toes were contracted, from the action of the flexor muscles. She could not walk without help, and when she attempted it, she always complained of something drawing her backwards.

After having taken a variety of cardiac, volatile, and tonic medicines, without any effect, Dr. Alderson was consulted, and advised her to take the toxicodendron. Six grains of the powder of the leaves of that plant were infused in eight ounces of boiling water, and a table spoonful of this infusion

given three times a day. The whole of this was taken in the end of September 1791, without any sensible effect, except a slight pricking sensation in the feet and hands.

About the beginning of October she began this medicine in another form : She took, twice a day, one fourth of a grain of the powdered leaves, made into a bolus, with conserv. Aurant. This was followed by a continuance of the pricking sensation ; and the arms, to the ends of the fingers, felt as if something warm were running down them. In a few days an irregular spasmodic fluttering was felt in the toes, and she was agreeably surpris'd to find that she could extend her fingers and toes a little. She was soon able to walk up stairs, without help, and found her hands also stronger and better. The medicine was continued for some time longer, gradually increasing the dose to four grains thrice a day. It seemed to act as a gentle aperient ; and frequently, when large doses were taken, it occasioned a slight vertigo, with a pain across the forehead, and a nausea for about half an hour after taking it.

In

In July 1793, by which time she had left off the medicine for twelve months, she had entirely recovered the use of her hands, and was able to walk a mile or two very well.

Besides this, three other cases are related by Dr. Alderson, two of them obstinate instances of paralysis, in which various remedies had before been tried, without effect. In both, the use of the toxicodendron was attended with evident benefit. The last case was a recent instance of the disease: And as here its effects were more remarkable, and the success more complete, than in any other, we shall present our readers with a short account of it.

A ship-carpenter, in the twenty-fourth year of his age, of a strong athletic make, and full habit of body, was admitted into the Hull Infirmary, on Wednesday the 13th of November 1793, for a paralytic affection, which had deprived him of the use of his right side.

His recollection was so impaired, that he could not himself give any account of the attack. But his wife informed Dr. Alderson, that, for a week before he lost the use of his

C 3

limbs,

limbs, he had, at times, complained of a dull pain in his head, and numbness in his right hand and foot; that, by the advice of some old women, he had been bled on the Monday, and that upon going out of doors, soon afterwards, he was suddenly seized with hemiplegia; in this state he was admitted into the Infirmary on the second day after.

A vomit was given him on his admission, which was followed, the next day, by a warm purgative. Volatile stimulant medicines were next employed for the course of the first week. But, as Dr. Alderson found he was not likely to gain any ground from the usual plan; and as he was desirous of trying the power of the toxicodendron in a recent case, he ordered for this patient, half a grain of the powdered leaves of the plant, in pills, three times a day. On the second day after the exhibition of this medicine, he felt a sudden convulsive twitching, or involuntary motion, in certain muscles of the affected side. From that moment he found he had the same motion at will. Every succeeding day he felt some muscle or other convulsively moved. And it was always remarked

by

by the other patients, in the same ward, that he afterwards possessed the power of voluntarily employing these muscles, which had been once convulsively affected, in consequence of the toxicodendron.

Thus encouraged in the use of the medicine, he regularly pursued it, and gradually increased the dose to one grain every four hours, taking care always to add to the dose, till he found some convulsive action was produced.

In the course of three weeks, during which time every injured muscle had felt the influence of this powerful drug, he regained the free and perfect motion of his legs and arms; and he recovered the full enjoyment of his mental faculties.

In the case here related, there does not remain any room for doubt, that very remarkable benefit was derived from the toxicodendron. And, although we do not know that equal confirmation of its efficacy has been afforded, in the experience of other practitioners; yet, from the instances here related, we have reason to hope, that the toxicodendron may prove a remedy of very

great utility in the treatment of paralysis. And, if this shall be found to be the case, there is good ground for believing, that it may, with advantage, be extended to some other affections.

III.

III.

An Historical Account of the Climates and Diseases of the United States of America, and of the Remedies and Methods of Treatment, which have been found most useful and efficacious, particularly in those Diseases which depend upon Climate and Situation. Collected principally from personal observation, and the communications of Physicians of talents and experience, residing in the several States. By William Currie, Fellow of the College of Physicians of Philadelphia. 8vo, Philadelphia.

ALTHOUGH this work be principally interesting to American practitioners, it contains a number of facts, from which practitioners of every country may derive much important information. Our limits do not permit us to follow Dr. Currie regularly through all his details; we shall, however, offer a few remarks, which may not only prove useful to our readers, but also ex-
cite

cite a desire for the perusal of the original work.

In his account of the diseases which occur in the several States of New England, he mentions, that the Ricketts, which, about thirty-five or forty years ago, had been pretty common, has now become so rare, that he has not seen the disease more than three or four times these eight or ten years. The Colica Pictonum too, also formerly pretty frequent, occurs now only among those who deal in lead, such as painters, &c. Dr. Currie offers an opinion, that this proceeds from the substitution of stone ware, instead of pewter, as the materials of table furniture. Acute diseases, he further remarks, are much less frequent, as well as much less fatal, than formerly: And chronic diseases, particularly Phthisis Pulmonalis, have taken their place. In speaking of the small-pox, he mentions the following facts; In the year 1752, there was an exact account taken, by order of the magistrates of the town of Boston, rendered upon oath, in order to remove the prejudices and objections made against inoculation, of all who had the small-pox, either in the natural

tural way, or by inoculation, and of the precise number of those who died of it in either way. By this account, it appears, that the number of those who had the disease in the natural way, including blacks, amounted to 5544; of which number there died, including blacks, 574. The whole number inoculated, including blacks, 2113; of which 30 died. At this time all present had the small pox, except 174; the total residents, at that time, including 1544 negroes, was 9710. The number of those who fled, to escape the small-pox, was estimated at 1800. In 1764, of 3000 inoculated patients, only 5 died, and these were children under five years of age. Three Hospitals were afterwards erected, in different parts of Massachusetts, for the purpose of receiving patients, desirous of being inoculated, and regulated in such a manner, as to prevent the infection from spreading, or being communicated to any of the rest of the inhabitants, as was expected; but, through some trespass of the rules, and the refractory disposition of some of the patients, the whole utility of the institution was frustrated; whereupon the law, permitting

permitting inoculation, was repealed, and another passed, prohibiting it, under severe penalties. Since that time, any person who has the misfortune to enter that state, with the disease, or with any of the infection adhering to his apparel or goods; and if any one be thereby infected with the disease, he is liable to pay to the party, so infected, treble damages, and costs of suit. Thus, Dr. Currie adds, the practice of inoculation, for the small-pox, stands wholly interdicted, within the New England States, and the inhabitants are deprived, through a mistaken policy, of rendering one of the most formidable and loathsome diseases mild and harmless.

Dr. P. Musheau, in a letter to Dr. Currie, makes the following observations on the fox-glove. I have never seen any harm done by the *Digitalis Purpurea* in any species of dropfy: On the contrary, I have exhibited it lately, in form of extract, with very great success. I tried its virtues on a patient, in a very debilitated condition, after the operation of the Paracentesis. The Peruvian bark was given along with it, which, together with the exercise of riding on horseback, prevented any further

further accumulation of water, and effected a cure. But, unless the digitalis be assisted by exercise and tonics, it is seldom of much avail. Some further remarks, on the use of this medicine, are given, in a letter to Dr. Currie, by a physician at Dorchester, whose name he was not permitted to mention. That gentleman has reaped much success from the employment of digitalis, in decoction, which he prefers to the powder. The following is his formula: Boil of the fresh green leaves of the fox-glove, four ounces, in common water, from two pints to one, and add to the strained liquid, of vinous spirit, two ounces. Of this decoction, one large table spoonful is to be given early in the morning, in every variety of Idiopathic dropfy, whether in the form of Hydrocephalus, Hydrothorax, Ascites, or Anasarca, and should be repeated every hour, till the patient has taken from three to eight or nine spoonful, or till sickness, or some other disagreeable sensation, be induced. The hydropic fluid generally disappears on the next day, or on the third day, without any repetition of the medicine, and frequently without any apparently increased evacuation;

at other times with vomiting, and a large flow of urine, and sometimes with purging stools. To some, whose constitutions appeared more robust, the dose was increased to a half or a whole spoonful more, if the first two or three spoonfuls occasioned no nausea. But, as some of these patients complained of very great debility during its operation, it was judged more prudent to use rather an under, than an excessive dose. In some, who had been two or three times relieved, by the same method, in the space of eight or ten months, a less quantity was found to succeed; to these half an ounce of the decoction, mixed with an ounce of simple peppermint water, or with a decoction of bark or snake-root, was given twice or thrice a day, for two or three successive days. On the day after the exhibition of the digitalis, or on the third day, or as soon as the sickness, occasioned by it, ceased, an infusion of the stem leaves of artichoke, or a strong decoction of the Peruvian bark, with a small quantity of some chalybeate medicine, such as the flores martiales, from two to six grains, or in lieu of this, the vitriolum martis, or common copperas, as it is improperly called,

called, from one quarter of a grain to two grains, dissolved in some aromatic water, or mixed with syrup of ginger, was generally given twice a day, and one grain of opium, every night, with as much rhubarb or aloes as occasioned a stool next day. This quantity of opium was persisted in for some weeks, without increase or diminution, as it seemed to be particularly serviceable.

In treating of the diseases of Pennsylvania, Dr. Currie observes, that the diseases, to which women of fashion are most subject, proceed from too great abstemiousness from meats of a nutritive quality, and from wine, but especially from the want of exercise; while they indulge too much in regaling themselves with strong infusions of palatable, but noxious tea. A considerable number of their complaints also proceed from the frequent changes of dress, and the alternate vicissitudes from heat to cold, to which fashion, and the love of pleasure, expose them. There are instances of young ladies, in Philadelphia, who, for the sake of an elegant and admired shape, apply a leather bandage, dipped in water, round their waists, every night on going to bed,

bed, which contracts as it becomes dry. The pernicious effects of this experiment must, Dr. Currie observes, be obvious to every one of common sense.

In his remarks on Pulmonary Consumption, Dr. Currie adopts a very opposite opinion from that communicated to him in a letter from Dr. Isaac Senter, noticed by us in our account of the transactions of the College of Physicians of Philadelphia. The pulmonary consumption, he tells us, appears to be the most frequent, as well as the most fatal of the chronic diseases which occur in Philadelphia. The greatest proportion of those who die of this malady, from the most accurate observations which he has been able to make, belong to the Society of the Friends; and of these the number is nearly in the proportion of three females to one male. Perhaps the want of vivacity in the people of this society, and the sedentary lives of their females, are the principal causes of this difference; these certainly, in some measure, counterbalance the advantages which they enjoy from their superior cleanliness, neatness, and sobriety.

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The method of treating this complaint, by the daily exhibition of emetics, as recommended by Dr. Reid, is, in general, he thinks, a very injudicious and pernicious one.

The improvements proposed by Dr. Rush, Dr. Currie has never had an opportunity of seeing put in practice, but he has had considerable experience of the good effects produced, by observing the method recommended by Dr. Fothergill, particularly in the incipient stage of the disease. When the disease is contracted in a northern climate, the patient should always pass his winters, if possible, in a climate within the tropics.

We shall finish our account of this publication, by quoting a part of the ingenious author's conclusion: We learn, says he, from the account of the diseases contained in the preceding pages, that the cold of the Northern States, properly guarded against, produces but few diseases of a dangerous nature; and that intermitting, remitting, or bilious fevers and fluxes, are scarcely known there; but in proceeding to the Southward, in Maryland and Virginia, where the heat is more intense, and of longer continuance, and the soil more

moist, especially upon lands in an imperfect state of cultivation, the diseases last mentioned are very prevalent, especially to foreigners, though the natives, who fix their habitations in dry and elevated situations, and observe a medium between excess and abstinence, enjoy a tolerable share of health. In South Carolina and Georgia, fevers and fluxes are still more epidemic, violent and obstinate, especially after the rice-harvest in August and September, when the waters are diminished, and permitted to stagnate and corrupt. The fevers, which occur at this season, are very anomalous, neither intermitting nor remitting perfectly, but participating much of that commonly called the yellow fever, which is often so fatal within the tropics.

Although the United States of America cannot boast of the superiority of their climates, over other countries, in parallel latitudes, they are exceeded, he thinks, by few in fertility of soil, and equalled by none in political advantages.

And, from whatever causes it may proceed, the inhabitants in the middle, and particularly

ticularly in the Northern States, enjoy a greater proportion of health, and live to a greater age, than the inhabitants of Europe. The diseases which do occur are more simple and uniform; and this country is intirely exempt from some of the most formidable and destructive, which infest the other quarters of the globe.

The Spotted Pestilence, he observes, the fatal offspring of famine, uncleanness, and vitiated air, has never yet reached our favoured shores.

The Small Pox, the Measles, the Malignant Quinsy, the Influenza, and almost every other contagious disease, were foreigners to this continent, till they were introduced, through the medium of commerce, from Europe, into which they were first conveyed from Asia, or the dominions of the despotic Turk, bordering on that immense continent.

The Leprosy, the Yaws, the Eliphantiasis, and other loathsome disorders, are endemic to Africa.

Whether Africa or South America gave origin to the Syphilis, remains uncertain,

though that dishonour is generally ascribed to the latter.

Nor is North America, like many other countries, subject to earthquakes, to the eruption of volcanos, hurricanes, periodical deluges, impetuous whirlwinds, noxious and consuming blasts of wind, or withering and protracted drought.

That America possesses many advantages, we are very far from denying. But it can hardly, with reason, boast any remarkable exemption from fatal diseases. Dr. Currie would not probably have considered these shores, as in this respect, particularly favoured, had the present treatise been published posterior to his account of the Synochus Icteroïdes, in which he describes one of the most fatal contagious that ever depopulated any country. That work affords a melancholy proof, how soon we may be convicted of error, when we boast of superior advantages, either natural or political.

IV.

An Enquiry into the Causes and Cure of Sore Legs. Vide Medical Enquiries and Observations, By Benjamin Rush, M. D. Vol. II. 8vo, Philadelphia.

DR. RUSH ascribes the bad success, generally experienced in the treatment of sore legs, to the want of a theory which shall explain their proximate cause. In attempting to establish a theory, which shall lay the foundation for more successful inquiries, upon this subject hereafter, he begins with the following propositions : *1st*, That sore legs are a disease of general debility: and *2^{dly}*, That they are a disease of the whole system. In support of the first proposition, he urges, the occupations and habits of those who are subject to the disease: Such persons are, day-labourers, sailors in the habit of lifting great weights, washerwomen, and all others, who pass the greater part of their time upon their feet, and hard drinkers of every rank and description. When

strong drink, labour, and standing long on the feet, are united, they more certainly, he says, dispose to fore legs, than when they act separately. That fore legs are a disease of the whole system, he infers, *1st*, From the causes which induce them, which act, more or less, upon every part of the body. *2^{dly}*, From their following or preceding diseases, which obviously belong to the whole system, such as fevers and dysenteries, pulmonary consumption, and apoplexy. *3^{dly}*, From their appearing almost universally in one disease, which is evidently a disease of the whole system, namely, scurvy. *4^{thly}*, From their becoming, in some cases, the outlets of menstrual blood, which is discharged in consequence of a plethora, which affects, more or less, every part of the female system. *5^{thly}*, From the symptoms of fore legs, which are, in some cases, febrile, and affect the pulse, in every part of the body, with preternatural frequency and force. *Lastly*, From the manner in which they are, sometimes, cured, by nature and art, as they often prove the outlets of many general diseases, and all the remedies which cure them, act, more or less, upon the whole system.

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How far our readers will be convinced, by this reasoning, must be left to their own determination. It must, however, be allowed, that every circumstance, here mentioned, affords an equally strong argument against his theory. Thus, if it be contended that sore legs are a disease of general debility, because they are sometimes induced by causes, acting on every part of the body, it may, with still greater justice, be argued, that they are not a disease of general debility, because much more frequently the causes inducing them act on the legs alone. If it be maintained that they are a disease of general debility, because they sometimes follow fever, dysentery, or phthisis pulmonalis, it may be concluded, that they are not a disease of debility, because in ninety-nine of a hundred instances of these diseases, no sore legs take place, though, from each of these diseases, the greatest possible degrees of debility arise.

But, though Dr. Rush's theoretical opinion, respecting this disease, be singular, and, in many respects, exceptionable, yet, the mode of cure he recommends, and which he has described with great accuracy, is nearly the

same with that of other practitioners. For, in such affections, every practitioner has recommended attention to the state of the system, in general, as well as of the local disease.

In all cases of fore legs, there is, Dr. Rush remarks, a tonic or an atonic state of the whole system; and the same state of excessive, or deficient action, takes place in the parts which are affected by the sores. The remedies, to cure them, therefore, should be general and local. In cases where the arterial system is affected, by too much tone, the general remedies should be, *1st*, Blood-letting. *2^{dly}*, Gentle purges. *3^{dly}*, Nitre. *4^{thly}*, A temperate diet, and a total abstinence from fermented and distilled liquors. And, *lastly*, Cool and pure air. The local remedies, in this state of the system, should be, *1st*, Cold water. *2^{dly}*, Soft poultices of bread and milk, or of bread moistened with lead water. *3^{dly}*, When the inflammation subsides, dry lint, confined by means of a soft plaister of wax and sweet oil. *Lastly*, Above all, rest and an horizontal posture of the leg. In fore legs, attended by too little general and local action, the following remedies are proper:

1st,

1st, Bark. 2^d, Mercury. 3^d, Mineral tonics. 4th, Gentle exercise. 5th, A nutritious and moderately stimulating diet. And, 6^{thly}, Opium. The local applications should consist of such substances as are gently escharotic, and which excite an action in the torpid vessels of the affected part. They should all be used, if necessary, in succession to each other; for there is often the same idiosyncrasy in a fore leg, to certain topical applications, that there is in the stomach, to certain aliments. After the use of these remedies, astringents and tonics should be applied, such as an infusion of Peruvian or white oak bark, the water in which the smiths extinguish their irons, lime water, bread dipped in a weak solution of green vitriol, so much commended by Dr. Underwood, and compresses wetted with brandy, or ardent spirits of any kind. Tight bandages are likewise highly proper. In scorbutic sores, on the legs, navy surgeons have spoken in high terms of an application of a mixture of lime juice and molasses. It is of the utmost consequence, in the treatment of fore legs, to keep them clean, by frequent dressings and washings. The success of old women,

women, is oftener derived from their great attention to cleanliness, in the management of fore legs, than to any specifics they possess, which are unknown to physicians. Dr. Rush concludes this inquiry by four observations, which are naturally suggested by what has been delivered upon this disorder.

1st, If it has been proved, says he, that fore legs are, in most cases, diseases of the whole system, is it not proper to inquire, whether many other diseases, supposed to be local, are not, in like manner, diseases of the whole system? And, if fore legs have been cured by general remedies, is it not proper to use them, more frequently, in other local diseases? I am led to make this remark, by having seen two instances of tumours, the one on the breast, and the other in the prostate gland, nearly cured by long journies.

2^d, If there be two states of action in the arteries, in fore legs, it becomes us to inquire, whether the same opposite states of action do not take place in many diseases in which they are not suspected: I have before observed that they occur in the scrophula. It
would

would be easy to prove that they exist in several other local diseases.

3d, If the efficacy of the remedies for fore legs, which have been mentioned, depends upon their being accommodated exactly to the state of the arterial system, and if this system be liable to frequent changes, does it not become us to be more attentive to the state of the pulse, in this disorder, than is commonly supposed to be necessary by physicians? Indeed, if one of the principles I have aimed to establish in this, and several of the foregoing essays, be just, that is, That all prescriptions should be suited to the state, and not to the name of a disease, it follows, that success in the practice of physic, will depend chiefly upon the occasional change of the dose, or quality of a medicine, with the changing state of the whole system.

4th, It has been a misfortune in medicine, as well as in other sciences, for men to ascribe effects to one cause, which should be ascribed to many. Hence diseases have been attributed, exclusively, to morbid affections of the fluids by some, of the muscles and nerves, by others. Unfortunately the morbid states
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of the arterial system, and the influence of those states upon the brain, the nerves, the muscles, the lymphatics, the glands, the viscera, the alimentary canal and the skin, as well as the reciprocal influence of the morbid states of each of those parts of the body upon the arteries, and upon each other, have been too much neglected, in most of our systems of physic. I consider, says he, the pathology of the arterial system as a mine. It was first discovered by Dr. Cullen. The man who attempts to explore it, will probably impoverish himself by his researches. But the man who comes after him, will certainly obtain from it a treasure, which cannot fail of adding greatly to the riches of medicine.

V.

An Account of the State of the Body and Mind in Old Age, with Observations on its Diseases, and their Remedies. Vide Medical Observations and Enquiries, By B. Rush, M. D. Vol. II. 8vo, Philadelphia.

DR. RUSH, in this Essay, mentions, *1st*, The circumstances which favour the attainment of longevity. *2dly*, The phenomena of body and mind which attend it. And, *3dly*, Its peculiar diseases, and the remedies which are most proper to remove or moderate them.

The circumstances which favour longevity, are, *1st*, Descent from long-lived ancestors. *2dly*, Temperance in eating and drinking. *3dly*, The moderate exercise of the understanding. *4thly*, Equanimity of temper. And, *5thly*, Matrimony.

He has never met, he tells us, with a single instance of a person having lived to be eighty years old, who was not descended
from

from long-lived ancestors. In some instances the descent was only from one, but, in general, it was from both parents. He found, however, several exceptions, to temperance in eating and drinking; but he did not meet with a single person, who had not, for the last forty or fifty years of his life, used, as part of his diet, tea or coffee, and bread and butter twice a-day. The duration of life, he remarks, does not appear to depend so much on the strength of the body, as upon an exact accommodation of stimuli to that strength. A watch-spring will last as long as an anchor, provided the forces, which are capable of destroying both, are always in an exact ratio to this strength. It has long been an established truth, that literary men, other circumstances being equal, are longer lived than other people. As a proof that equanimity of temper is conducive to old age, persons who live upon annuities, or enjoy life rents, generally live longer than others. In the course of his inquiries, he met with only one person, beyond eighty years of age, who had never been married; while, on the contrary, he saw several old women, who had
borne

borne from ten to twenty children, and suckled them all. The reader will perhaps hardly refrain from smiling, when he is informed that the Doctor met with one woman, a native of Herefordshire in England, who is now in the hundredth year of her age, who bore a child at sixty, menstruated till eighty, and frequently suckled, at the same time, two of her children, though born in succession to each other. She had past the greatest part of her time over a washing tub. Dr. Rush has not found that sedentary employments prevent long life, where they are not accompanied with intemperance in eating or drinking. He observes, that although there appears, in the human body, a certain capacity of long life, which seems to dispose it to preserve its existence, in every situation; yet this capacity does not always protect it from premature destruction. For, among the old people, whom he examined, he scarcely met with one who had not lost brothers or sisters, in early and middle life, who were born under circumstances, equally favourable to longevity with themselves.

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The phenomena of the body and mind, in old age, which he mentions, are, *1st*, There is a great sensibility to cold. *2dly*, Impressions upon their ears, excite sensation and reflection much quicker than those made upon their eyes. *3dly*, The appetite for food is generally increased. *4thly*, The pulse is generally full, and frequently affected with pauses in its pulsation. *5thly*, The marks of old age appear earlier, and are more numerous, in persons who have combined with hard labour, a vegetable or scanty diet, than in persons who have lived under opposite circumstances. *6thly*, Old people tread upon the whole base of their feet at once, in walking. *7thly*, The memory is the first faculty of the mind which fails. *8thly*, He never knew a single instance, he says, in which the moral or religious faculties were impaired. *9thly*, Dreaming is universal among old people. *10thly*, Many circumstances, in old age, mark a second childhood. *11thly*, A second infancy, sometimes, even appears in old age. *12thly*, There is a disposition in the system, in extreme old age, to renew certain parts. *Lastly*, The fear of death appears to be much

much less in old age, than in early or middle life.

The diseases of old age are, he observes, chronic and acute. The chronic are, *1st*, Weakness of the knees and ankles, a less ability to walk, and tumours in the head and limbs. *2^{dly}*, Pains in the bones. *3^{dly}*, An excessive flow of tears, and mucus from the nose. *4^{thly}*, Difficulty of breathing, and a short cough, with copious expectoration, generally attended with a weak or hoarse voice. *5^{thly}*, Costiveness. *6^{thly}*, An inability to retain the urine, as long as in early or middle life. *7^{thly}*, Wakefulness. *8^{thly}*, Giddiness. *9^{thly}*, Deafness. And, *10^{thly}*, Imperfect vision. The acute diseases, most common amongst old people, are, *1st*, Inflammation of the eyes. *2^{dly}*, Pneumonia notha. *3^{dly}*, Colic. *4^{thly}*, Palsy and apoplexy. *5^{thly}*, Piles. *6^{thly}*, Difficulty in making water. *7^{thly}*, Quartan fever.

All the diseases of the old people, he adds, both chronic and acute, originate in debility. The remedies for the chronic diseases, where no morbid action takes place in the system, are stimulants. The *first* of these is

heat. *2dly*, Generous diet and drink. *3dly*, Young company in preference to old. *4thly*, Gentle exercise. *5thly*, Cleanliness. And, *lastly*, Opium. Heat, he advises, to be communicated by means of the warm bath, or stove rooms, and of warm cloathing, more especially warm bed clothes. Old people, he imagines, should be indulged in eating between the ordinary meals of families, and in the use of wine, in moderation. He thinks they enjoy better health and spirits in the families of their children, where they are surrounded by grandchildren, than when they live by themselves. Moderate and regular exercise, always in fair weather, is highly beneficial to old people. Their dress, he remarks, should not only be clean, but more elegant than in youth or middle life. It serves to divert the eye of spectators from observing the decay and deformity of the body, to view and admire that which is always agreeable to them. Opium not only abates the pains of the chronic rheumatism, and the uneasiness of the old man's cough, but also removes wakefulness, and restrains, during

during the night, the troublesome inclination to make water.

For the cure of the acute diseases of old people, Dr. Rush refers to the ordinary medical books, contenting himself with strongly recommending blood-letting, as, in his opinion, inflammatory diseases are more fatal to old people than is generally supposed. How is this recommendation of blood-letting to be reconciled to his opinion, that all the diseases of old people, even the acute, originate in debility? Will the debility be removed by blood-letting?

Death, from old age, is the effect, he thinks, of a gradual palsy. It shews itself first, in the eyes and ears, in the decay of sight and hearing. It appears next in the urinary bladder, in the limbs and trunk of the body, then in the sphincters of the bladder and rectum, and finally in the nerves and brain, destroying in the last, the exercise of all the faculties of the mind.

Few persons, he observes, appear to die of old age. Some one of the diseases which have been mentioned, generally cuts the last thread of life.

VI.

An Enquiry into the Causes and Cure of the Pulmonary Consumption, By Benjamin Rush, M. D. Vide Medical Enquiries and Observations. Vol. II. 8vo, Philadelphia.

PULMONARY Consumption, by the united testimony of American Physicians, appears not only to have become very prevalent, but also to be still increasing in frequency in the western world. Dr. Rush had published, in the first volume of his Medical Enquiries, an Essay, intitled, “Free Thoughts upon the Cause and Cure of Pulmonary Consumption,” and he now offers the present Essay, with a view to fill up the sketch of his former one, by establishing, more fully, the truth of the opinions therein advanced. His first endeavour is to shew that this disease is the effect of causes which induce general debility. In support of this, he adduces the remote and exciting causes of the disease, the nature of the occupations and habits of persons

sons most liable to it, and the period of life at which it attacks. The remote causes are, he says, Pneumony—Catarrh—Hæmoptysis—Rheumatism—Gout—Asthma—Scrophula—Nervous and Intermitting Fevers—Measles—Repelled Humours from the surface of the body—The Venereal Disease—Obstructed Menfes—Sudden Growth, about the age of puberty—Grief, and all other debilitating passions of the mind—Hypochondriasis—Improper Lactation—Excessive Evacuation of all kinds, more especially by stool—Cold and Damp Air—External Violence, acting upon the body—And, finally, every thing that tends, directly or indirectly, to impair the vigour of the system.

The most frequent exciting cause, he observes, of Consumption, is the alternate application of heat and cold to the whole external surface of the body; but all the remote causes, which have been enumerated, operate as exciting causes of consumption, when they act on previous debility. Original injuries of the lungs, seldom induce this disorder, except they first induce a debility of

the whole system, by a troublesome and obstinate cough.

The persons most liable to the disease are, studious men, mechanics, who lead sedentary lives in confined places, women, and all persons of irritable habits, whether of body or mind. Although in children, and in persons beyond the fortieth, or even the fiftieth year, the disease sometimes appears, yet the most general appearance of its attack, is between the eighteenth and thirty-sixth year of life; a period, Dr. Rush remarks, in which indirect debility is oftener produced, than in any other stage of life, by the excessive exercises of the body and mind in the pursuits of business or pleasure.

Dr. Rush, *2dly*, alledges that Pulmonary Consumption is a primary disease of the whole system. This, he thinks, demonstrated, *1st*, From the causes which produce it, acting on the whole system. *2dly*, From the symptoms of general debility, which always precede the affection of the lungs. *3dly*, From the disease alternating with other disorders, as rheumatism, gout, madness, &c. which obviously belong to the whole system. *4thly*,
From

From its analogy with several other diseases, which, though accompanied with local affections, are produced by a morbid state of the whole system, as the rheumatism, the gout, the measles, small-pox, the different species of cynanche, and more especially apoplexy and pneumony. *5thly*, From the disease existing without ulcers in the lungs. And, *lastly*, From its being relieved or cured only by remedies which act upon the whole system. Besides these arguments, Dr. Rush inquires into the supposed proximate causes of consumption, from whence he concludes, that they are totally inadequate to the production of the disease, unless preceded or accompanied by general debility. In confirmation of this, he observes, that he does not recollect a single instance of the disorder having followed a wound in the lungs, either by the bayonet or a bullet, during the late war; that Hæmoptysis is not always followed by consumption; that tubercles in the lungs are the effects of general debility, communicated to the tracheal vessels; that catarrh often continues for twenty or thirty years, without inducing pulmonary consumption in persons

persons who pursue active occupations ; that, in the hereditary consumption, there is either an hereditary debility of the whole system, or an hereditary malconformation of the breast ; that contagion, by which consumption may certainly be communicated, produces debilitating effects : and that, where consumption is produced by the repulsion of cutaneous humours, it is either preceded by general debility, or not induced till the whole system hath been previously debilitated by a tedious and distressing cough.

From these premises he concludes, in the *third* place, that the cough, tubercles, ulcers, and purulent or bloody discharges, which occur in the pulmonary consumption, are the effects, and not the causes, of the disease ; and that all attempts to cure it, by inquiry after tubercles or ulcers, or into the quality of the discharges from the lungs, are as fruitless as any attempt would be to discover the causes or cure of dropfies, by an examination of the qualities of collections of water ; or to find out the causes and cure of fevers, by the quantity or quality of the discharges which take place, in those diseases, from the kidneys and skin.

In

In reasoning upon the circumstances by which it may be explained, how general debility should terminate in a disorder on the lungs, although Dr. Rush leaves the explanation doubtful, he observes, that it would seem as if the debility, in the cases of consumption, is seated chiefly in the blood vessels, while that debility, which terminates in the stomach and bowels, is confined chiefly to the nerves; and that the local affections of the brain arise from a debility, invading alike the nervous and arterial systems.

We have thus endeavoured to give a short view of Dr. Rush's opinion respecting the nature and cause of pulmonary consumption. Without pretending to enter into any particular examination of his arguments, of which the limits of our publication will by no means admit, we may with confidence assert, that, by arguments equally conclusive, debility may be proved to be the cause of every disease whatever to which the human body is subject. No expression has of late been more frequently employed, by medical writers, as a cloak for ignorance, than the term Debility. There is no disease, to which the
human

human body can be subjected, which will not, either directly or indirectly, induce debility ; and, accordingly, the necessity of supporting the *vis vitæ* in certain stages of every affection, has never been questioned. But, because debility exists in palsy, in pulmonary consumption, and in ulcerated legs, to suppose that it is the cause of these diseases ; and, which is an unavoidable consequence of this doctrine, that these are, in reality, the same disease, is a doctrine too absurd to require a serious refutation. And those who rest satisfied with this supposition, that all diseases depend on debility, in place of having made any real progress in the investigation of truth, only shut the door against all rational and useful inquiry.

In treating of the method of cure, the first object on which Dr. Rush insists, is to attempt the removal of the disease in its earliest stage, that is, before it produce the symptoms of cough, bloody or purulent discharges from the lungs, and inflammatory or hectic fever. The symptoms which mark this first stage are, he says, too seldom observed, or, if observed, they are too often
treated

treated with equal neglect by patients and physicians. These symptoms, according to Dr. Rush, are a slight fever, increased by the least exercise; a burning and dryness in the palms of the hands, more especially towards evening; rheumy eyes upon waking from sleep; an increase of urine; a dryness of the skin, more especially of the feet, in the morning; an occasional flushing in one, and sometimes in both cheeks; a hoarseness; a slight or acute pain in the breast; a fixed pain in one side, or shooting pains in both sides; headach; occasional sick and fainty fits; a deficiency of appetite, and a general indisposition to exercise and motion of every kind. The remedies for this stage of the disorder consist, he observes, in a desertion of all the remote and exciting causes, particularly sedentary employments, damp or cold situations, and whatever tends to weaken the system. When the disease has not yielded to this desertion of its remote and exciting causes, he has, he tells us, recommended the cold bath, steel, and Peruvian bark, with great advantage.

When the first stage has been neglected, the disease generally terminates, he says, in
different

different periods of time, in pulmonary affections, which shew themselves under one of the three following forms: *1st*, A fever, accompanied by a cough, a hard pulse, and the discharge of blood or mucous matter from the lungs. *2dly*, A fever of the hectic kind, accompanied by chilly fits and night sweats, and a pulse full quick, and occasionally hard. The discharges from the lungs, in this state of the disorder, are frequently purulent. And, *3dly*, A fever with a weak quick pulse, a troublesome cough, and copious purulent discharges from the lungs, a hoarse and weak voice, and chilly fits and night sweats, alternating occasionally with a diarrhœa. As these different forms do not succeed each other in the order just stated, Dr. Rush, to distinguish them from each other, styles the first the Inflammatory, the second the Hectic, and the third the Typhus species; and he then proceeds to point out the means of palliating the disease in each of this species. In the treatment of the first species, he recommends blood-letting very strenuously, as a principal palliative; and even asserts, from experience, that where inflamma-

tory

tory action attends the last scene of the disorder, there is often more relief obtained by a little bleeding, than by the use of opiates; and it is always a more humane prescription, in desperate cases, than the usual remedies of vomits and blisters. He recommends, in this species, also, a vegetable diet, nitre in moderate doses of ten or fifteen grains, three or four times a day, and the exercise of walking while the air is cold and dry. Vomits he thinks rather hurtful.

In the treatment of the second species, which he styles the Hectic, Dr. Rush confesses, that he has been seldom able to afford much relief by the use of any medicines. The treatment in the third stage, he imagines, ought to consist of stimulating medicines, cordials, and stimulating diet.

He thinks that a dry situation, country air, loose dresses, with a careful accommodation of them to the changes of the weather; artificial evacuations, by the means of blisters and issues; certain fumigations and vapours, as the vapour from a mixture of equal parts of tar, bran, and boiling water; lozenges, syrups, and demulcent teas; opiates; those
positions

positions of the body favourable to the abatement of cough; sleeping between blankets in winter, and on a matrafs in summer; and the moderate use of the lungs in reading, public speaking, laughing and singing, afford palliative means, applicable to every species or stage of the disorder.

Dr. Rush next treats of the radical remedies for the pulmonary consumption: For this purpose he depends solely on the various species of exercise, which he divides into active, passive, and mixed: The active including walking and the exercise of the hands and feet in working and dancing: The passive including the rocking in a cradle, swinging, sailing, and riding in carriages of different kinds: And the mixed being confined chiefly to riding on horseback. These various exercises must be suited to the different states of the patients. In cases of extreme debility he recommends the following order: 1st, Rocking in a cradle, or riding on an elastic board, commonly called a chamber-horse. 2^{dly}, Swinging. 3^{dly}, Sailing. 4^{thly}, Riding in a carriage. 5^{thly}, Riding on horseback. 6^{thly}, Walking. And, 7^{thly}, Running,

ning, dancing, &c. Sailing, Dr. Rush supposes, to be principally useful to those, who, during the voyage, use the exercise attending a sea-faring life. In slight cases of consumption, short journeys on horseback are serviceable; but in dangerous cases, in Dr. Rush's opinion, benefit can alone be derived from long journeys. To render travelling on horseback effectual in a consumption, it should, he says, be continued, with moderate intervals, from six to twelve months; but the cure should not be rested upon a single journey. It should be repeated, he tells us, every two or three years, till the patient has passed the consumptive stages of life. Nay, he must do more, he must acquire a habit of riding constantly, both at home and abroad; or, to use the words of Dr. Fowler, he must, like a Tartar, learn to live on horseback; by which means he will acquire, in time, the constitution of a Tartar.

How far the method of cure here proposed is the best hitherto discovered against phthisis we will not pretend to say. Physicians, we fear, will still have to lament,
that,

that, in most cases, they can do but little to palliate, and far less to remove this disease. But, if the modes of cure here recommended be, in reality, the most useful, we may, without hesitation, venture to assert, that from thence many strong objections may be brought against Dr. Rush's own theory of the disease.

VII.

VII.

An Essay on the Malignant Pestilential Fever, introduced into the West Indian Islands from Boullam, on the Coast of Guinea, as it appeared in 1793 and 1794. By C. Chisholm, M. D. Surgeon to his Majesty's Ordnance in Grenada. 8vo, London.

IN an introduction to this essay, the author gives some account of Grenada, as far as relates to the face of the country, its productions, its diseases, and the state of the weather. With regard to the face of the country, Dr. Chisholm observes, that the windings of the innumerable hills in Grenada produce a change of temperature at the end of every hundred yards. Under their shelter the heat is almost insupportable, and the body is bathed in the most profuse sweat. But beyond this, upon turning an angle and being suddenly exposed to the prevailing winds, which there blow with violence proportioned to the narrow valleys which confine

them, the body is in an instant dried up, an aguish sensation takes place, and not unfrequently topical pains, and inflammations of a most dangerous nature, are instantaneously produced. And this, Dr. Chisholm thinks, is the principal cause why topical inflammations, particularly those of the liver, are met with at all seasons, during the hot and rainy, as well as the cool and dry weather. It also, he thinks, accounts for the efficacy, as a preventive, of any medium between the shirt and skin, which may absorb the perspired fluid, whilst it keeps up an equal temperature on the surface, though changes take place in the surrounding atmosphere. Thus he tells, a flannel shirt, however strange it may seem to an European, not acquainted with this island, is the best preservative of health in Grenada, and he adds, perhaps through the torrid zone.

After an elegant description of the singular and romantic scenery of different parts of the island, and an account of some of its vegetable and animal productions, particularly of the *Holothuria Priapus* of Linnæus, he observes, that the soil of Grenada may be divided into four kinds: 1st, A black rich
mould,

mould, found chiefly in low valleys, and on the gentle slopes of the more rounded hills.

2d, A mixture of light sand and black mould, generally found near the sea, and containing

a large portion of sea salt. *3d*, A mixture

of black mould, sand, and a metallic earth

of a redish colour, found in the steeper parts

of what may be called the second region of

the island, or where the cultivation is extend-

ed with difficulty. *4th*, A red earth or ochre,

frequently intermixed with black shining me-

tallic particles, sterile and incapable of cul-

ture, with even the aid of the strongest

manure.

With regard to the productions of the island, after an animated detail, Dr. Chisholm observes, that whatever can contribute to the ease and comfort of man, to his food, his drink, his medicine, his clothing, his bedding, or his dwelling, are here abundantly, and, in most instances, spontaneously produced. Nor is food confined to the vegetable kingdom; cattle, sheep, hogs, and fowls of various kinds, may be had in great abundance; while an inexhaustible supply of fish, of uncommon variety and goodness, may be

resorted to throughout the whole year, and constitute a considerable part of the food of the lower class of people. It is not therefore surprising, Dr. Chisholm observes, that foreign luxuries, too liberally used, should shorten the lives of one description of inhabitants; whilst another, confining themselves to the wholesome indigenous aliment of the country, live to an age uncommon even in the temperate regions of cold climates. Grenada, therefore, Dr. Chisholm thinks, notwithstanding the variable temperature occasioned by the irregularity of its surface, and the moisture of its atmosphere, is certainly healthy, particularly when compared to other countries of the same latitude.

Our author is of opinion, that were we to exclude the effects of the miasma of marshy districts, and those proceeding from the irregular temperature of the air, we should find, that, in common years, there is by no means much sickness; and that, in general, it is only in those places where marshes are abundant, that diseases *mali moris* prevail. There, indeed, one year with another, fully an eighteenth part of the inhabitants annually perish. But in
other

other districts, where these dreadful causes of disease do not exist, the mortality is not more than one in thirty-seven or thirty-eight.

After his observations on the face of the country, the productions, and the diseases of Grenada, he describes the changes which took place in each month of the years 1784, 1785, 1786, and 1793, and to this he subjoins the following table of the highest, lowest, and medium height of the Thermometer during these years. The Thermometer employed was graduated according to Fahrenheit's scale.

Months.	1784	1785	1786	1793	Months	1784	1785	1786	1793
January. {	H. 85	82	84	89	July. {	H. 87	86	88	88
L. 81	80	82	83	83	L. 82	84	76	77	
M. 83	80	83	86	86	M. 84	84	77	82	
Feb. {	H. 85	85	84	88	H. 88	88	87	89	
L. 81	82	82	81	81	L. 84	78	78	79	
M. 83	82	83	84	84	M. 85	80	82	84	
March. {	H. 86	85	86	87	H. 86	90	90	84	
L. 83	83	83	80	80	L. 81	78	84	80	
M. 84	83	84	83	83	M. 83	86	88	86	
April. {	H. 86	85	86	87	H. 83	85	90	90	
L. 81	83	83	84	84	L. 82	74	79	80	
M. 83	81	84	85	85	M. 85	80	87	85	
May. {	H. 87	87	86	87	H. 84	84	88	88	
L. 82	83	85	80	80	L. 82	80	78	78	
M. 84	84	84	83	83	M. 83	81	83	83	
June. {	H. 86	87	88	87	H. 84	88	86	88	
L. 84	81	77	77	77	L. 78	75	77	80	
M. 85	84	83	82	82	M. 82	81	84	84	

After

After this introduction, Dr. Chisholm proceeds to give a particular account of the appearance of the Malignant Pestilential Fever in Grenada; and from this account, there can be no doubt of its being brought into Grenada, by the ship Hankey, from the coast of Africa. The Hankey, loaded with stores and adventurers, arrived at Boullam, from England, about the beginning of April 1792. She lay there for nine months, and during that time the settlers were obliged to live on board. As the rainy season came on almost immediately after their arrival, and as the heat was at the same time excessively great, they endeavoured to shelter themselves from both, by raising the sides of the ship several feet, and covering her with a wooden roof. In this situation upwards of two hundred people, of whom women and children constituted a part, were confined in a sultry moist atmosphere.

Want of cleanliness, joined to depression of mind, a consequence of disappointment, must certainly, Dr. Chisholm thinks, be considered as the causes of the very fatal fever which broke out among them, some time after

after their arrival at Boullam. The Hankey arrived at the port of St. George, in Grenada, on the 19th of February 1793, after the death of almost the whole of her crew, and also of several seamen, who had been procured at St. Jago, in the passage from Boullam to Grenada.

From this period Dr. Chisholm dates the commencement of a disease, which, he believes, was before unknown in Grenada, and certainly unequalled in its destructive tendency. The manner in which it was first communicated, and its subsequent progress, he thinks, clearly evinced its malignant and pestilential nature.

Captain Remington, an intimate acquaintance of Captain Coxe's of the Hankey, was the first person who visited that ship after her arrival in St. George's Bay: He was soon after seized with a fever, which terminated fatally on the third day. The boatswain, and four sailors of the Defence, were the next who suffered. They went on board the Hankey the day after her arrival, and staid all night. All of them were seized with the fever, and died also in three days. These

communicated the infection to many others, and the disease extended itself with such rapidity, that, before the end of May, of 500 sailors who manned the trading ships in the harbour, upwards of 200 died of this fever.

About the middle of April the disease began to appear on shore. It was introduced by a negro-woman, who took in sailors clothes to wash : The whole of her family were successively afflicted with it ; and by them it was communicated to those with whom they had any intercourse. And, in fine, all who from friendship, business, or duty, communicated with the diseased, were themselves soon affected with it. And no instance occurred wherein the contagion could not be traced to its particular source. Where people were exposed to contagion, all prophylactics, of which a great variety were tried, were found to be of no avail. But from several circumstances, particularly, as Dr. Chisholm thinks, from superior care and attention to cleanliness, the fever was much milder when it appeared among the inhabitants, than it had been among the sailors.

Not

Not long after this, the disease appeared among the foldiers in garrison. Of 280 men belonging to the 45th regiment, 24 died of it; that is, something less than one in twelve. About the 1st of June, it began to appear among the negroes, belonging to the estates in the neighbourhood of the town. And, although great apprehensions were entertained, yet they were soon found to be groundless; for it did not spread much among them, nor was it marked with the fatality which attended it, when it appeared among the whites. Not above one in four were affected with it; and among those infected, it did not prove fatal to more than one in eighty-three.

Dr. Chisholm has been particular in stating the progress of this fever, chiefly with a view to demonstrate, 1st, That it was uncommonly infectious. 2^{dly}, That it arose from human contagion, heightened by various causes to a pestilential degree of violence. And, 3^{dly}, That, like the plague, it was communicated in every instance, either by actual contact with an infected person, or by breathing air, charged with effluvia, perspired or discharged from

from the lungs of the affected person ; or by touching the clothes of the infected, or by sleeping in a place where they had been.

It is curious, and may, he thinks, be useful to observe the gradation of this fatal malady, with respect to the various descriptions of people exposed to its infection. Neither age nor sex were exempted from its attack. But some were more obnoxious to it than others ; and the colour had evidently much influence in determining its violence. The gradation it observed, with regard to the different classes of inhabitants, appeared to be the following :

1st, Sailors, more especially the robust and young, those least accustomed to the climate, and those most given to the drinking new rum.

2^d, Soldiers, more especially recruits lately from Europe ; and the most intemperate.

3^d, White males, in general, lately arrived, more especially young men from Europe.

4th, All other white males, more especially the lower classes, and of them the most

most intemperate ; those debilitated by recent sickness.

5th, White females, more especially those connected with the shipping, and those lately from Europe.

6th, People of colour, from Mustees to Cabres.

7th, Negro-men, more especially sailors and porters.

8th, Negro-women, more especially housewenches.

9th, Children, more especially those of colour.

In giving an account of this disease, Dr. Chisholm first describes it, as it appeared in those seized with it, in its most violent and fatal form ; and afterwards treats more particularly of its most remarkable symptoms. In the worst instances the patient, without any previous complaint, suddenly becomes giddy. He loses his eye-sight, every thing seems to move round with inconceivable velocity, he falls down almost insensible, and in that state remains for half an hour or upwards. During this paroxysm the body feels cold, and is overspread with cold sweat, which

which issues from every pore in astonishing abundance. On his recovery the cold goes off, and is instantly succeeded by intense heat, and a quick small hard pulse; the head aches dreadfully, particularly the forehead, generally accompanied with pain in the right side, and at the præcordia. The eyes are much inflamed, watery, protruded, and wildly rolling. The face is much flushed, and much heat is felt at the pit of the stomach, which is soon attended with nausea, retching and vomiting. The patient soon after complains of intolerable pain in the small of his back, and in the calves of his legs.

During twelve, eighteen, twenty-four, or thirty-six hours, these symptoms continue increasing, and are then succeeded by general coldness, cold sweat, and a greater or less degree of coma or delirium, or a state very much resembling intoxication. With the patient in this state, life is lengthened out to sixty or ninety hours from the first attack: A short interval of reason then takes place: The patient thinks himself better, and is for a moment flattered with the prospect of recovery. But a second fit, as sudden and unexpected

expected as the first, comes on, during which he foams at the mouth, rolls his eyes dreadfully, and throws out and pulls back his extremities in violent and quick alternate succession.

This, according to Dr. Chisholm, has been the general progress of the disease in its worst form. The symptoms which chiefly distinguished the disease were, he tells us, the uncommon suddenness of the attack; the remarkable acute pain in the loins and calves of the legs; the watery, inflamed, and rolling eyes; the flushing of the face; the tendency to coma from the very onset; the peculiarity of the delirium; and, the pain confined to the forehead, seldom extending even to the temples.

The delirium attending this fever is very peculiar. The countenance, the eyes, and the action resemble very much those of a person inebriated. It is accompanied with a constant restlessness and efforts to get out of bed; and the mind seems agitated by the objects which were most its pursuit during health. Coma also, Dr. Chisholm tells us, is often a most remarkable symptom in this fever.

fever. After the first day, there is, in general, more or less tendency to it: And if the patient survived the third, he has found it in almost every instance present. The patient in this state lies on his back, with his eyes half open. He is drowsy and insensible of pain or irritation, but moans and sighs much. And in all those who became comatose, Dr. Chisholm has uniformly observed a very considerable and permanent dilatation of the pupils.

Another appearance which unequivocally marked the character of this fever, was a species of efflorescence, which resembled more patches of red or livid spots, than what is generally understood by the word *Petechiæ*. This Dr. Chisholm considered as a very fatal symptom; and he does not recollect a single instance of recovery when it took place. The neck, shoulders, and breast, were generally the parts on which it appeared. But, in a very few violent cases, almost the whole body became of a deep livid or black colour, a few hours before death.

Although in the commencement of this fever the pulse be, in general, quick, hard, and

and small, yet, in some instances at this period, it is full, which, Dr. Chisholm thinks, affords a favourable prognostic. But in no disease is the pulse more subject to variation than in this. With considerable heat of the skin he has often observed the pulse not above fifty in the minute. Upon the whole, however, he never found it quicker, than 130, nor slower than 30 in the minute.

Subfultus tendinum was by no means a common symptom; but tremor of the hands and of the lips, and violent spasmodic contractions of the legs and arms, were very frequent, and always prognosticated much danger.

The appearance of the tongue was very various: In some patients it continued white, with florid edges, to the very last; in others it became dark coloured very early, and changed to a black a little before death.

Aphthæ sometimes occurred, and were, Dr. Chisholm thinks, generally a bad symptom. There were two kinds of eruption about the lips of a very opposite nature: one such as frequently appears at the termination of common remittents, and indicating a favourable

vourable change; the other consisting of black spots, such as might be made by the point of a painter's fine pencil, all round the mouth, but especially on the upper lip; and indicating, with certainty, a fatal termination.

Hæmorrhage, Dr. Chisholm tells us, occurred in this disease much oftener, and more frequently, and was attended with more dangerous consequences, than in any other he has met with, the scurvy excepted. Robust, plethoric, and gross habits, were most subject to hæmorrhage. It was observed to occur from various places; but the most profuse discharge was either from the nostrils or anus, and has frequently amounted to three or four pounds at a time. In several instances, the discharge, he thinks, has evidently been the immediate cause of death. He has never observed this hæmorrhage to be critical, nor has it, in any instance, permanently relieved the headach, or pain in the breast or side. Patients indeed sometimes at first thought, that in consequence of it, the headach was abated. But cold clammy sweats, an almost imperceptible pulse, and supervening delirium

rium or coma, even evinced the fallacy of the prognostic.

A rawness of the nose, often terminating in eschars, remarkably itchy, was also not unfrequently observed. These ulcers disappeared in proportion to the patient's recovery ; but when the issue of the disease was fatal, they became gangrenous.

Another symptom, observable in many instances, which, from its singularity, Dr. Chisholm thinks it proper to mention, was a peculiar affection of the testicles and scrotum. About the end of the second day patients often began to complain of a violent pain in the testicles. With this they were sensible of a contraction of the spermatic cord, and a drawing up of the testicles towards the abdomen. On examination this was felt to be the case, while, at the same time, it seemed to be much lessened in size, and the scrotum remarkably flaccid and empty. Soon after this the surface of the scrotum became painful, and an excoriation took place upon it, from which a considerable quantity of offensive matter issued. A similar discharge took place also from the urethra.

When the event of the disease was favourable, this gradually ceased; but in cases which afterwards terminated fatally, it became ichorous or bloody, and insufferably foetid. In favourable cases, the purulent discharge from the scrotum, formed an incrustation on the parts; which, when separated in the convalescent state, either spontaneously, or by means of a warm bath, was found very much to resemble moistened parchment. In fatal cases, the affection of the scrotum always terminated in gangrene, a few hours before death.

In this fever the change of voice was a very remarkable circumstance. From a strong tenor or manly sound, it was often observed to sink to a treble, or a sound much softer, lower, and shriller than the natural one. In cases terminating fatally, this change was most remarkable, and took place at an early period. But, if in the course of the disease, there took place an alteration of the voice, to its natural tone, it was an almost certain sign of a favourable change.

A suppression of the urine, a symptom by no means uncommon in other fevers, was particularly

particularly remarkable in this, for its coming on early, its duration, and the cause which seemed to produce it. For, upon dissection, Dr. Chisholm found the urinary bladder in a thickened state, similar to what is described by Dr. Gilchrist, to have occurred in some cases, recorded in the third volume of the Edinburgh Physical Essays.

The urine was generally of a deep red colour; sometimes it was brownish, sometimes green, very frequently bloody; and, in a few instances, much inclining to black, and of an oily consistence. Its smell was generally offensive in the highest degree.

Constipation almost universally prevailed, and appeared to arise from a suspension of tone in the intestinal canal; for, upon exciting the fibres to act, a redundant evacuation was generally the consequence. The fæces, at the commencement of the disease, were seldom very fœtid; but, during its progress, became excessively so; and, a little before death, when they were discharged insensibly, the smell was intolerable. The colour and appearance of the discharge varied much, from a yellow, or a yellowish white,

black; and, from a considerable degree of thickness, to the exact appearance of coffee grounds.

The thirst, in general, was not considerable; it was, however, a bad sign when it ceased, especially if at the same time the tongue appeared parched, cracked, and black.

A principal distinction, according to Dr. Chisholm, between this disease and the typhus icterodes, is the yellow suffusion, which, in the former, very seldom happened; while, in the latter, it is almost always present. He however observes, that, in some protracted cases on shore, and, in some of the sailors, where there might have been a combination of the pestilential and yellow fevers, this symptom appeared about the fifth, seventh, or ninth day.

Dr. Chisholm is of opinion, that the contagion always acted within four days from its application to the body; and his situation afforded him many opportunities of knowing this with sufficient exactness.

Another point of great importance is, the ascertaining the distance at which it is possible to communicate contagion. The result of
Dr.

Dr. Chisholm's inquiries and observations, on this subject, amounted to the following facts: 1st, That those, who most carefully avoided the houses where the infection was, were the most certain to escape. 2^{dly}, That when the disease was in a house, avoiding the chamber of the sick prevented infection. 3^{dly}, That merely entering the chamber of the sick, without approaching near to the diseased person, never communicated infection. 4^{thly}, That approaching so near to the diseased person, as to be sensible of the fœtor of his breath, or, of the peculiar smell which is always emitted from the bodies of the sick, in this disease, or touching the bed clothes, on which he lay, generally occasioned nausea, slight rigors, and often headach, at the moment, and, some hours afterwards, produced the disease itself. 5^{thly}, That actual contact, so that the perspired fluid of the sick person might adhere to the hands, &c. of the healthy person, more certainly produced the disease. 6^{thly}, That touching the wearing apparel of a person, actually diseased, or who had just recovered from the disease, communicated infection, as certainly as actual contact of the

skin. *7thly*, That frequently the merely passing an infected person, or one who wore the clothes he had on, when labouring under the disease, if the effluvia, proceeding from them, were blown upon him, produced the disease.

From all these observations, Dr. Chisholm thinks it evident, that the infectious effluvia do not extend themselves beyond a limited distance from the person or thing, from which they are emitted; and that this distance may be fixed, at the utmost, from six to ten feet.

The danger, which attended the opening of bodies, prevented Dr. Chisholm from extending his inquiries far in that way. He opened only five, and he presents us with an account of the appearances which he discovered in these. Three of them were sailors, who died on the fifth day, and laboured under the worst symptoms of the disease. In one of them, it began and terminated in convulsive affections. In his body, the intestines were much inflated, inflamed, and sphacelated, particularly the duodenum, a little beyond the pylorus; the liver had shrunk to less than one half its natural size, was uncommonly flaccid,

flaccid, and of a colour nearly approaching to buff; the gall bladder was flaccid, and contained a small quantity of very dark coloured ropy bile. The spleen and pancreas were in a natural state; but the lungs were highly inflamed, and of a livery texture and hue, though no symptom of marked pulmonary affection could be perceived, during the existence of the disease. The bladder contained nearly three quarts of urine; it was dilated to a considerable size, and its coats much thickened. The patient had been much tormented with pain through the pelvis, and an almost total suppression of urine.

The second who had been seized with the disease, under the form of an aguish paroxysm, died strongly convulsed. The viscera, in general, were in the same state, particularly the liver. All the vessels of the intestines were uncommonly turgid. The right kidney was mortified, although, during his illness, no symptom of inflammation of that organ was perceived. The quantity of urine was small, and the bladder a good deal enlarged, and much thickened.

In

In the third and fourth, the appearances in the abdomen and thorax were very much the same, as in those already mentioned. But, in these cases, Dr. Chisholm also examined the brain, and found it considerably affected. In one of them, a young man, about eighteen years of age, belonging to the artillery, the quantity of blood in the brain was surprisingly great; for, exclusive of what was lost in opening the cranium, fully two pounds were collected. In the left ventricle, the quantity of water was also considerable, but there was none in the right. The fourth ventricle contained a larger quantity than ordinary, but the plexus choroides was almost obliterated.

In the fifth body opened, a young man of the royal artillery, who died in twenty-nine hours from the commencement of the fever, the appearance of the viscera was exactly the same, as in those already described.

In treating of the nature of this malignant fever, Dr. Chisholm judiciously points out many circumstances, in which it differs essentially from the typhus icterodes, or yellow fever of the West Indies. The yellow fever, he observes, is endemic and sporadic; the other

other epidemic, and imported from another country: the one is evidently caused by marsh effluvia, heat, violent exercise in that heat, night air and dews, and the abuse of spirituous liquors; the other, on the contrary, is caused by contagion alone. While the pestilential fever was evidently highly contagious, Dr. Chisholm assures us, that of the numerous instances of yellow fever, of which he has had occasion to treat, he has never once known it to be contagious. It has always been evidently produced by some one or other of the causes above-mentioned; and other persons, on board the same ships, or in the same houses, have continued in perfect health. Upon the whole, therefore, judging from the remote and proximate causes, from the symptoms, and from the dissections, he is inclined to consider the fever, introduced into the West Indies from Boullam, as truly pestilential, and differing from the plague, strictly so called, only in not always exhibiting the symptoms, that are said to be peculiar to that malady.

It appeared evident to Dr. Chisholm, that the first stage of this fever was an inflammatory

tory diathesis, in which the tendency to gangrene was much greater, than in any other disease he had ever met with. And it was, he thinks, no less evident, that this stage was succeeded by one in which nervous excitement and a putrescent diathesis were equally remarkable, and equally tended, with an uncommon rapidity, to the dissolution of the patient. It was also, he observes, evident, that these diatheses had an extraordinary aptitude to run into each other, without shewing any distinct termination of the one, or accession of the other; and it appeared, that the imprudent use of the means of obviating either of these states, inevitably hastened the progress of the other, to its peculiar termination. From these data, the following indications naturally resulted:

1st, To discharge, from the stomach and intestines, acrid and offensive humours.

2dly, To obviate inflammatory diathesis, without producing a tendency to putrescence.

3dly, To moderate the tendency to putrescence, and to obviate it when actually present.

4thly,

4thly, To restore tone and energy to the system.

With the view of fulfilling the first of these indications, Dr. Chisholm had recourse to a remedy, formed of an ounce and a half of the soda vitriolata, and two grains of the antimonium tartarifatum, dissolved in a pound and a half of pure cold water. Of this solution, a large wine glassful was given, every hour, to the patient, until a sufficient effect was produced, or till the whole was taken. The two first glassfuls generally operated as an emetic, and fully evacuated the stomach. The medicine, after this, acted on the intestines, and excited a copious discharge of their contents. If, at the same time, a diaphoresis broke out, which was commonly the case, the patient found himself considerably relieved. By this practice alone, in several instances where Dr. Chisholm's assistance was called for very early, he had often the satisfaction of seeing a speedy and complete termination put to the complaint.

To fulfil the second indication was, Dr. Chisholm observes, infinitely more difficult; and he indeed considers the fate of the patient

tient as altogether depending on the judicious selection of means for removing the inflammatory, without producing a tendency to the putrescent diathesis. In this disease, the ardent heat of the surface, the oppressed hard pulse, the pain of the side, the oppression at the præcordia, the headach, and throbbing at the temples, seemed strongly to indicate the use of bleeding. But, although the blood, drawn in the cases where this remedy was employed, was remarkably florid, and always threw up an inflammatory crust, of greater or less thickness, and although the pains seemed to undergo a temporary mitigation, yet the consequence, at the expiration of a few hours, was, he tells us, always fatal.

Finding that bleeding was, on no account, admissible, and that different antiphlogistics, which he used, were totally ineffectual, Dr. Chisholm had recourse to mercury. He employed pills, composed of five grains of calomel, two of antimonial powder, and one of opium. This was repeated to the same extent, eight times in twenty-four hours. The propriety of this practice was justified by the success.

success. For if salivation was speedily raised, the danger was removed, and the patient recovered. And to effect this, in several instances, it was pushed to an incredible length, with astonishing success. To some patients fully four hundred grains of calomel were given, before the salivary glands were affected.

Dr. Chisholm was inclined to think, that mercury, when pushed to salivation, brought about a change in the system, which obviated inflammatory diathesis, without weakening, in a dangerous degree, the powers of the living principle. This opinion he has been inclined to adopt, by what has uniformly happened to those who have been cured of hepatitis by salivation, their strength having been comparatively increased, after the mercury had ceased to act. And, notwithstanding the rapid course of this fever, he found that salivation was often induced early enough to save the patient. For, though in other climates its action may be tardy, yet in a warm climate, no such difficulty, in general, exists.

But, independent of all reasoning, the success attending the use of mercury, in this fever,

fever, was an irresistible argument for the employment of it. And this was demonstrated, not only by the experience of Dr. Chisholm, but also of other practitioners. Mr. White, in particular, who had the charge of the sick of the 45th regiment, and who, on the recommendation of Dr. Chisholm, had recourse to the use of mercury, declared, that he did not lose, afterwards, one man, who had taken a sufficient quantity of calomel, to excite salivation. Both Dr. Chisholm and Mr. White were themselves striking instances of the efficacy of the practice. They were both dangerously ill, and cured by salivation being excited.

In this fever, Dr. Chisholm found blisters of little or no use, at any period of the disease, or wherever applied. He had repeatedly recourse to this practice, to mitigate headach, to lessen pain, to remove irritability of the stomach, and to raise the vital powers in the low comatose state, but always without success, excepting in two cases. In one of these, the irritability of the stomach was completely removed, by a blister applied to the scrobiculus cordis: In the other, from

a blister applied between the shoulders, the effect was wonderful. The discharge was uncommonly large, black, and foetid in an intolerable degree. The instant this took place, the patient became better, and soon after recovered, without the use of any other remedy. Dr. Chisholm was also informed, by a medical gentleman of the 67th regiment, that in his own case, as well as those of four or five soldiers, he experienced extraordinary relief from the application of a blister to the fore part of the head. But as, in his own practice, they were very generally employed without success, he thinks it difficult to account for so great a difference of the result, on any other footing, than that these cases of the disease were less violent, than most of the instances which occurred to him.

The suddenness of the changes, in this fever, and the apparent sinking of the vital powers, a few hours after the accession of the fever, might naturally, Dr. Chisholm observes, have led to the belief, that in this fever, tonics, antiseptics, and the whole tribe of cordials, could alone be useful. But innumerable instances, he tells us, occurred, demonstrating

monstrating the fatal consequence of this practice. And the use of the Peruvian bark, immediately after the operation of evacuating medicines, was hurtful in the extreme. In every case, where salivation took place, little farther was required, than the plentiful use of nourishing simple food and wines. But when the mercury had not this effect, or when its operation was tardy, it was necessary, Dr. Chisholm tells us, to have recourse to the Peruvian bark. In this fever, however, the bark, we are informed, was extremely disagreeable to the patient; and the irritability of the stomach was so great, that it could very rarely be retained.

Opium, so often useful in other fevers, attended with irritability of the stomach, was, in this, Dr. Chisholm observes, seldom beneficial. Vitriolic æther was, he tells us, the only medicine permanently useful, in enabling the stomach to receive and retain Peruvian bark: and a few cases occurred, in Dr. Chisholm's practice, in which he thinks the cure was completed by æther alone. He gave æther in the following manner: After allowing the patient to remain undisturbed for
about

about an hour, he exhibited a tea spoonful of the æther, in about half a wine glassful of cold water. After this, the patient was kept undisturbed for two hours, when the dose was repeated; and, in this manner, it was continued every two or three hours, till the spasm of the stomach was entirely overcome. Æther given in this manner, Dr. Chisholm found extremely grateful to the patient; and, he adds, that thirst, nausea, and oppression, have often fled before it.

Dr. Chisholm made a trial, in this disease, of the practice mentioned by Dr. Guthrie, as having been found most successful against the plague, by the Russian Physicians. But, as the number of unsuccessful cases was equal to that of recoveries, he had no encouragement to proceed.

Among other remedies, Dr. Chisholm made trial also of the Angustura bark. As this medicine possesses a pungent and spicy taste, Dr. Chisholm hoped, that, by stimulating the stomach, and thereby obviating spasm, it might have a better chance of being retained, than the Peruvian bark, and operate powerfully as an antiseptic and tonic. He

gave this remedy in twelve cases : five of these were soldiers of the Royal Artillery ; and the remaining seven, inhabitants, or sailors. All the soldiers recovered with remarkable rapidity. Of the other patients, three recovered. So that, of the twelve patients, with whom it was tried, only one in three died. It appeared, therefore, to be evidently a more suitable medicine than the Peruvian bark. Previous to its use, Dr. Chisholm had always recourse to the evacuants already mentioned. He then gave the powder of the Angustura bark, mixed with water, to the extent of a scruple, every hour, or two scruples in three hours. And, in all the cases which recovered, an almost immediate change took place. Instead of the heat being increased, and the surface becoming dry, which too often followed the early use of Peruvian bark, an agreeable glow, an increase of warm sweat, and a diminution of pain were the consequences.

With regard to the fourth indication, the restoration of tone and energy to the system, when the patient was in a state of recovery, change of air and suitable diet were the
means

means, which he found most useful. For, contrary to what is observed in most other febrile diseases, Peruvian bark was here either useless or hurtful.

As long as the patient remained in the infected room, although all the symptoms of the disease had disappeared, the progress of recovery was remarkably slow. Extreme debility was the immediate consequence of the disease, in all cases. But this convalescent debility was, Dr. Chisholm tells us, of much shorter duration, after treatment with mercury, than any other. Of all the means of recovery from this state, change of air and situation were the most efficacious.

Suitable diet was the next means of restoring the tone and energy to the system. As soon as signs of recovery took place, the great object was, to select such articles of food, as were most palatable, most simple, most nourishing, and of smallest bulk. Sago, panada, and the preparation of the Indian arrow root, with a large proportion of Madeira wine, were by far the best. To these, therefore, with occasionally the addition of a soft, fresh egg, Dr. Chisholm confined his convalescents. All the convales-

cents were uncommonly fond of porter and small beer ; and, as these always agreed well with the stomach, he generally indulged them in the liberal use of these liquors. Riding, also, and moderate exercise, of any kind, contributed very much to the restoration of health.

During the prevalence of such a fever, the great prophylactics, according to Dr. Chisholm, are temperance in eating and drinking, regularity in exercise, the proper distribution of time, with respect to sleep and watching, attention to cleanliness of person, and the avoiding such gratifications as have a tendency to weaken the vital powers.

After these general observations, farther to illustrate the history of this malignant, pestilential fever, and throw additional light on the mode of treatment, Dr. Chisholm gives a particular account of fifteen cases, selected from many hundred, which fell under his observation. For these, however, we must refer our readers to the work itself, which, as containing much important information, respecting this dreadful disease, may justly be considered, as well deserving a careful perusal.

VIII.

An Account of the Bilious Remitting Yellow Fever, as it appeared at Philadelphia, in the year 1793. By Benjamin Rush, M. D. Professor of the Institutes, and of Clinical Medicine, in the University of Pennsylvania. 8vo. Philadelphia.

THE learned and indefatigable author of the treatise, now before us, has had too many opportunities of witnessing the fatal disease, an account of which is here presented to the public. And his philanthropic exertions, in the line of his profession, give him an unquestionable title to no uncommon share of merit. We must, however, observe, that we can by no means adopt all his sentiments or reasoning on this subject. It is not, however, our intention here, to enter into any minute examination of his opinions; or to give any particular account of those controversies, which were carried on between Dr. Rush and some other practitioners of Philadelphia,

in a manner ill suited to a subject of such serious concern. We shall here chiefly confine ourselves to a faithful detail of those practices, which Dr. Rush, from extensive experience, found to be most successful in combating this affection. We may only briefly observe, that, notwithstanding the arguments, which Dr. Rush has brought to prove, that this disease originated in Philadelphia, from a quantity of damaged coffee, it appears to us much more probable, as was decidedly the opinion of the College of Physicians of Philadelphia, that the contagion was imported, about the beginning of August, 1793; first, because it is certain, that a disease in every respect similar, and marked by a similar mortality, had, for several months before, prevailed in several of the West Indian islands, to which, as appears by Dr. Chisholm's excellent treatise, it had also been imported from Africa; and, secondly, Dr. Rush himself allows, that this disease made its dreadful ravages, in Philadelphia, in consequence of being propagated, not from the original exhalation, which he supposes at first gave rise to it, but from one individual to another, by contagion, which
indeed

indeed he too severely felt from his own personal experience.

Of Dr. Rush's theoretical opinions, respecting the manner in which this contagion operated on the human body, after the remarks which we have already offered on his doctrine, concerning pulmonary consumption, it is perhaps unnecessary to say any thing. We shall only observe, that those who suppose, they have a satisfactory explanation of the operation of every cause of disease, and of every remedy, from its either increasing or diminishing excitement, exhausting or accumulating irritability, deceive themselves most egregiously. This is incontestibly demonstrated, by what we observe of contagious diseases, particularly the febrile contagions. Thus, it must be universally admitted, the small-pox never is produced by any other cause whatever, but the introduction of a peculiar and specific contagious matter into the body ; and that this specific contagion never produces, in the first instance at least, any other disease but small-pox. In like manner, we have the strongest reasons for believing, that the contagion, giving rise to this pesti-

lential fever, never produced any other affection, excepting as a sequela of the primary disease; and, that the disease itself never arose from any other cause, but from this specific contagion : yet, innumerable other causes daily give rise to every possible degree, either of increased or diminished excitement. Although, therefore, various conditions of the body, induced by many different causes, may tend either to forward, or retard the peculiar action of the contagion, yet, as no other cause can induce the disease, we must necessarily hold all that has been said, as to its operation, arising from its inducing either direct or indirect debility, to be chimerical and erroneous. For, were the doctrine well founded, not only the fever, which is the subject of the present publication, but also small-pox, measles, and various other affections of a similar nature, should every day, and in all nations, be induced by different causes. Incontestable facts, however, afford the clearest demonstration, that this never has been the case.

But although we cannot assent to many of Dr. Rush's opinions, respecting the origin of
this

this contagion, and the manner in which it operated on the human body; yet, his observations respecting the method of cure, founded on extensive experience, well deserve the attention of every medical practitioner. And of this we shall here endeavour to give a short account. In the beginning of August, at the commencement of this fever in Philadelphia, Dr. Rush employed, with success, gentle purges; but, after the 20th of that month, finding, that they were not productive of the wished-for effects, he laid them aside, and had recourse to a gentle vomit of ipecacuanha, on the first day of the fever, and to the usual remedies for exciting the action of the sanguiferous system. He gave the Peruvian bark, in all its usual forms of infusion, powder, and tincture. He joined it with wine, brandy, and aromatics. He applied blisters to the limbs, neck, and head. Finding all these ineffectual, he attempted to rouse the system by wrapping the whole body in blankets dipt in warm vinegar. To these practices, he added one more, he rubbed the right side with mercurial ointment, with a view of exciting the action of the vessels in the whole system,

tem, through the medium of the liver, which he then supposed to be principally, though symptomatically, affected by the disease. None of these remedies, however, appeared to be of any service. For, although three out of thirteen recovered, to whom they were applied, yet he had reason to believe, that they would have recovered much sooner, had the cure been trusted to nature.

Perplexed and distressed by his want of success in the treatment of this fever, Dr. Rush waited upon Dr. Stevens, an eminent and respectable physician from St. Croix, who happened to be at that time in Philadelphia; and asked for such advice and information upon the subject of the disease, as his practice in the West Indies would naturally suggest.

His information to Dr. Rush was, that he had long laid aside evacuations of all kinds in the yellow fever; that he had found them to be hurtful, and that the disease yielded more readily to Peruvian bark, wine, and, above all, to the use of the cold baths. He advised the bark to be given in large quantities, by glyster, as well as by the mouth; and he directed

rected buckets full of cold water to be thrown frequently on the patients, after laying them in a proper vessel.

The next day after this interview, Dr. Rush began the use of each of these practices, with great confidence of success. He prescribed Peruvian bark in large quantities; and, in one case, he ordered bark injections every four hours. But he had the mortification to find, that the bark was either offensive to the stomach, or rejected by it, in every case in which he prescribed it. The application of the cold water was in general grateful, and in several cases produced relief, by inducing a moisture on the skin; and, for some time, he had hopes of benefit from it. But, he was soon distressed to find this plan not more effectual, than those which he had previously used. And, of the patients, to whom the cold bath was administered, in addition to the other remedies recommended by Dr. Stevens, three out of four died of the disease.

Baffled in these attempts to stop the ravages of this fever, from farther reflection on the subject, and the perusal of a manuscript account of the yellow fever, as it prevailed in Virginia,

Virginia, in the year 1741, Dr. Rush resolved to try the effects of copious evacuation by purging; and, to this he was encouraged from the account given, of the benefit derived from purging, by Sir John Pringle, Dr. Cleg-horn, and Dr. Balfour, in diseases of the same class with the yellow fever.

He resolved, on mature deliberation, to make trial of a purgative, which he had often seen employed in bilious fever, by Dr. Thomas Young; ten grains of calomel combined with as much powder of jallap. But, finding ten grains of jallap insufficient to carry the calomel through the bowels, in the rapid manner he wished, he added fifteen grains of the former to ten of the latter. But, finding that even this dose was slow and uncertain, in its operation, he issued to his patients three doses, each consisting of fifteen grains of jallap and ten of calomel; and directed one to be given every six hours, till they procured four or five large evacuations. The effect of this powder, he tells us, not only answered, but far exceeded his expectations; for, it perfectly cured four, out of the first five patients,

to

to whom he gave it, though some of them were advanced several days in the disorder.

After such proof of the safety and success of this purgative, Dr. Rush gave it afterwards with confidence. He imparted the prescription to the College of Physicians, on the 3d of September, and he endeavoured to remove the fears of his fellow-citizens, by assuring them, that the disease was no longer incurable. Many other practitioners, the names of eight of whom he particularly mentions, immediately adopted the practice with equal success.

Dr. Rush did not, however, he tells us, rely upon purging alone, to cure the disease. His theory led him to the use of other remedies, to abstract excess of stimulus from the system. These were blood-letting, cool drinks, low diet, and the applications of cold water to the body.

According to Dr. Rush, the following effects were observed to result from purging in this disease.

1st. It raised the pulse, when low, and reduced it, when præternaturally full.

2^d. It revived and strengthened the patient,

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as was evident, from the facility with which patients, who had staggered to a close stool, walked back again to bed after a copious evacuation.

3d. It abated the paroxysm of the fever.

4th. It frequently produced sweats, when given on the first or second day of the fever, after the most powerful sudorifics had been taken to no purpose.

5th. It sometimes checked the vomiting, which occurred in the beginning of the disorder, and it always assisted in preventing the more alarming occurrence of that symptom, about the 4th or 5th day.

6th. It removed obstructions in the lymphatic system.

7th. It prevented, in most cases, a yellowness of the skin, by discharging the bile through the bowels, as soon, and as fast, as it was secreted.

The reasons, which determined Dr. Rush to have recourse to blood-letting, were,

1st. The state of the pulse, which became more tense, in proportion as the weather became more cool.

2d. The appearance of a moist and white tongue,

tongue, on the first day of the disorder, a certain sign of an inflammatory fever.

3d. The frequency of hæmorrhagies from every part of the body, and the perfect relief given by them, in some cases.

4th. The symptoms of congestion in the brain, resembling those which occur in the first stage of hydrocephalus internus.

5th. The character of the diseases, which had preceded the yellow fever, and were all more or less inflammatory.

6th. The warm and dry weather, which had likewise preceded the fever.

After having begun to employ blood-letting in this disease, Dr. Rush was encouraged to continue it, by the appearance of the blood, and by the obvious and very great relief which his patients derived from it.

He gives the following account of the appearances of the blood, drawn from a vein in this disease.

1st. It was, in the greatest number of cases, dense, and of a scarlet colour, without any separation into crassamentum and serum.

2d. There was, in some cases, a separation
of

of the blood, into crassamentum and yellow serum.

3d. There were a few cases, in which this separation took place, and the serum was of a natural colour.

4th. There were many cases, in which the blood was as fizy, as in pneumony and rheumatism.

5th. The blood was, in some instances covered above, with a blue pellicle of fizy lymph, while the part, which lay in the bottom of the bowl, was dissolved.

6th. It was, in a few instances, of a dark colour, and as fluid as molasses.

7th. In some patients, the blood, in the course of the disease, exhibited nearly all the appearances which have been mentioned.— They were varied, by the time in which the blood was drawn, and by the nature and force of the remedies, which had been used in the disorder.

Dr. Rush represents the following as being the effects of blood-letting upon the system.

1st. It raised the pulse, when depressed, and quickened

quickened it when it was prematurely flow, or subject to intermissions.

2d. It reduced its force and celerity.

3d. It checked, in many cases, the vomiting, which occurred in the beginning of the disorder, and thereby enabled the stomach to retain the purging medicine.

4th. It lessened the difficulty of opening the bowels.

5th. It removed delirium, coma, and obstinate watchfulness. It also prevented and checked hemorrhagies.

6th. It disposed, in some cases, to a gentle perspiration.

7th. It lessened the sensibility of the system; and accordingly patients, he tells us, frequently rose from their beds, and walked across their rooms, in a few hours after the operation had been performed.

8th. The redness of the eyes frequently disappeared, in a few hours after bleeding.

9th. It eased pain.

10th. But, in many cases, it had an effect, the opposite of easing pain. It frequently increased it in every part of the body, more

especially in the head, which resulted, Dr. Rush thinks, from too sparing an abstraction.

11th. When used early on the first day, it frequently strangled the disease in its birth, and generally rendered it more light, and the convalescence more speedy and perfect.

12th. In those cases which ended fatally, blood-letting restored or preserved the use of reason, rendered death more easy, and retarded the putrefaction of the body after death.

With regard to the circumstances, which regulated the use of blood-letting, Dr. Rush observes, that in acute cases, where it had been omitted for three days, it was seldom useful. He preferred bleeding in the exacerbation of the fever, but he bled in several instances in the remission, when the pulse was tense and chorded. And if this was its state, he bled, although it was præternaturally slow. He directed blood-letting also, both in those cases where the fever appeared in a tertian form, and where the patient was able to walk about, if he found the pulse full and tense. For he observed, that these supposed mild forms of the disease, when left to themselves, frequently

frequently terminated in death. A dissolved state of the blood, and the presence of p^{et}-techiaë, did not deter him from the repetition of blood-letting, provided the pulse retained its fulness and tension. He considered a diminution of the force and frequency of the pulse, together with the absence of vomiting, as the only signals for laying aside the lancet. And it was remarkable, he tells us, that fainting was much less common after bleeding, in this fever, than in ordinary inflammatory fevers.

Having thus endeavoured to give a full view of Dr. Rush's observations, respecting the use of cathartics, and of blood-letting, in this fever, it will be unnecessary to say much of the other practices, which he employed; especially as, with regard to the advantages derived from these, in fevers in general, almost all practitioners are agreed.

Cool and fresh air were found to be highly grateful and beneficial to those labouring under this fever; and the same benefits resulted from the use of cold drinks. These consisted chiefly of lemonade, tamarind, jelly, and apple-water. These drinks alone were taken

in the early stage of the disorder. Towards the close of it he permitted the use of porter and water, weak punch, and, when the stomach would bear it, weak wine whey.

Dr. Rush forbade all cordial and stimulating food ; and he observed, that the less his patients ate, even of the mildest vegetable food, the sooner they recovered. As the action of the pulse diminished, he indulged his patients with weak chocolate, with milk, to which roasted apples were added, or the like. And, towards the crisis, he advised the drinking of weak chicken, veal, or mutton broth. After the crisis had taken place, he permitted mild animal food to be eaten in small quantity, and to be increased according to the waste of the system.

Cold water, Dr. Rush observes, was a most agreeable and powerful remedy, in this disorder. He directed it to be applied by means of napkins, to the head, and to be injected into the bowels by way of glyster. He likewise advised the washing of the face and hands, and sometimes the feet with cold water, and always with advantage.

Dr. Rush had observed, that such of his
patients

patients as were salivated by the mercurial purge, recovered in a few days. This led him to conclude, that calomel might be applied to other purposes, than that of discharging bile from the bowels. And he accordingly employed it with advantage, to excite a salivation as soon as possible.

There were several symptoms in this disease, which, according to Dr. Rush, required a specific treatment. For the vomiting with a burning sensation in the stomach, which came on about the fifth day, he found no remedy equal to a table spoonful of sweet milk, taken every hour, or to small draughts of milk and water. The vomiting was sometimes stopped by a blister, applied to the external region of the stomach. A mixture of liquid laudanum and sweet oil, applied to the same place, gave relief, where the stomach was affected by pain only, without vomiting. A distressing pain, which often seized the lower part of the bowels, yielded, in almost every case, to two or three emollient clysters, or to the loss of a few ounces of blood.

Dr. Rush concludes this treatise, with some strictures on the mode of treatment, adopted

by some other physicians. But of these we shall here say nothing; referring such of our readers, as wish to consider them, to the work itself. Dr. Rush is certainly entitled to the highest praise, for the unwearied attention which he bestowed upon this disease, and for the benevolent liberality of sentiment, with which he took the speediest method of communicating, both to medical practitioners, and to the public at large, that practice, which he found to be most effectual. It is, however, to be lamented, that, notwithstanding his best endeavours, the mortality from this disease was uncommonly great. From the list, which Dr. Rush has published, of the burials of each day, from the 1st of August, to the 10th of November, there is reason to presume, that upwards of three thousand of the inhabitants of Philadelphia, fell victims to this disease, during that period. It is, we think, no improbable calculation, that at least one fifth of all who were affected with this disease, were cut off by it. And from the account, which Dr. Rush has given, it appears, that the deaths in his own family

family were not under this proportion.—
More successful methods, therefore, of combating, in future, the fatality of such an affection, are still a desideratum in medicine.

IX.

A Treatise on the Synochus Icteroïdes, or Yellow Fever, as it lately appeared in the City of Philadelphia ; exhibiting a Concise View of its Rise, Progress, and Symptoms, together with the method of Treatment, found most successful ; also Remarks on the nature of its Contagion, and directions for preventing the introduction of the same malady in future. By William Currie, M. D. Fellow of the College of Physicians of Philadelphia, and Member of the American Philosophical Society. 8vo. Philadelphia.

THIS treatise is introduced by a short sketch of the rise and progress of the disease which is here treated of. Dr. Currie asserts, contrary to the opinion of Dr. Rush, that this disease was imported into Philadelphia, by a vessel which lay at a wharf, in the neighbourhood of Water Street, the place in which it was first observed. When it is considered

sidered, that this disease was most extensively and readily communicated in Philadelphia, by contagion from one individual to another, that a similar disease had, for several months before, prevailed with great fatality in the West Indian islands, and that many opportunities must have occurred, for the disease being transported from thence, this opinion appears to us, as we have indeed formerly observed, much more probable than the conjecture of Dr. Rush, who supposes that it arose from an exhalation, afforded by some damaged coffee; a circumstance, which may certainly be considered, as a much less powerful cause of disease, than many other exhalations, to which every large city is almost constantly exposed.

Upon the first appearance of the disease, almost every case, which occurred for the first week or two, could be traced to the source, at which it at first commenced. From this source, it spread gradually by contagion, over the greatest part of the city. It made its first appearance in the beginning of August. The greatest number confined with it was about the middle of October, when it was computed

ted, that more than eight thousand persons laboured under it, at the same time. But after that time, its declension was so rapid, that it appeared, as if extinguished by a miracle. For, by the 10th of November, there was scarcely a person to be found subjected to it.

Although this disease was highly contagious, yet the influence of this contagion, Dr. Currie tells us, was circumscribed to a narrow sphere; for none but those who approached near to the sick, or to such articles as had been in contact with them, were affected.

All, who either shut themselves up in their houses, or even carefully avoided all intercourse, either directly or indirectly with the sick, though constantly abroad in the open streets, escaped the disease. The prisoners in the jail and work-house, the pensioners in the poor-house, and the patients in the hospital, who were effectually excluded from all intercourse, with the infected, also entirely escaped the disease.

Those exposed to the contagion generally began to be affected, we are told, between the
third

third and the eighth day. The state of mind seemed to have great influence in hastening or retarding the effects of the contagion. Those under the influence of fear were sooner affected, after exposure, than those who were less concerned. Abstemious regimen, excessive fatigue, frequent purging, blood-letting, and exposure to night air, had a similar effect. But a lax state of the bowels appeared to have some influence in rendering the disease more mild. Neither age nor sex were exempt from it, not even infants at the breast. But those who were fat, corpulent, and indolent, were observed to be both most susceptible of the contagion and to suffer most.

It was a remarkable circumstance, that the French from St. Domingo, who had taken shelter in Philadelphia, from a sanguinary war, almost to a man escaped the disease; while those from France were as liable to it as the natives of Philadelphia. This Dr. Currie ascribes, and with some degree of probability, to the West Indians being before accustomed to a warm climate, and to the effects produced by the frequent large excretions of bile,

bile, to which they are particularly subject, rendering the duodenum and biliary ducts insensible to the poison. It is, he observes, a singular fact, that, in the West Indies, this disease seldom affects any but strangers, or new comers, from a colder or more temperate climate.

In Philadelphia, the whole inhabitants might be considered as on the same footing with strangers in the West Indies. For the only difference was, that, in place of being carried to the contagion, the contagion was brought to them.

We will not pretend to say, that Dr. Currie's explanation of this remarkable fact is ill founded. But another conjecture may perhaps be hazarded, with no less appearance of probability, drawn from the analogy of small-pox, measles, and other similar febrile contagions. It is well known, that in these diseases, the being once subjected to the complaint, affords almost certain defence against future contagion. In this disease, in like manner, the action of a first contagion, though it do not altogether prevent, may yet at least diminish the influence of future contagion.

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On the same principle, we may perhaps also account for the sudden ceasing of this disease in Philadelphia, about the beginning of November. This may have arisen from all who were at that time susceptible of the action of contagion, having been already acted upon by it. The change of temperature will hardly we think, account for its disappearing so suddenly. For, from the thermometrical observations, published by Dr. Rush, it appears, that the cold was by no means great. Most contagions act very readily at a degree much inferior to what is there observed. And we know, that other contagions entering towns, as, for example, that of the influenza, often cease as suddenly, when no explanation can be given from any change in the sensible qualities of the atmosphere.

The conjecture here offered is, in some degree, corroborated by the observations of Dr. Linning, who has asserted, that, at Charlestown, those, who once had the disease, could not take it a second time. Although this observation may not be strictly true, and although some indubitable instances may have occurred at Philadelphia, of a second attack

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in the same person, yet this is no more than has, in certain instances, been observed, both with regard to small-pox, measles, and scarlet fever. Notwithstanding such exceptions, the action of contagion on the body, may have a very considerable effect in diminishing its future action. Thus, those who have lived long in situations where it is frequent, may be presumed to have been subjected to it in early life, and may, by this means, have obtained some defence against the future influence of the same contagion.

After a concise, but distinct, and apparently accurate, history of the disease, which he thinks, from the most common progress of the symptoms, may be divided into three stages, in the first of which inflammatory, in the second bilious, and in the third putrescent symptoms prevailed, Dr. Currie proceeds to treat of the prognosis. He gives a very explicit view of the favourable and unfavourable symptoms in each stage.

The favourable signs in the first stage were hæmorrhagies from the nose, with relief of the head during the exacerbations; a gradual reduction of the pulse, heat and oppression at
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the præcordia, a diarrhœa, or loose stools mixed with bile, coming on before the third day. The unfavourable symptoms of the first stage were, a strong, hard, and quick pulse, with furious delirium, and pervigilium; a quick, small, and irregular pulse, with low delirium; great muscular debility, exquisite pain at the stomach, oppression and sense of stricture at the præcordia, great thirst, constant nausea, retching and restlessness; obstinate costiveness, and the stools of a whitish colour. A want of action in the bowels, a great insensibility to purges and clysters, also gave room for much apprehension.

In the second stage, the favourable signs were, an abatement of the vomiting, anxiety and oppression at the præcordia, relief from the burning pain at the stomach; natural heat in the forehead and limbs; open bowels; natural coloured stools, and turbid urine. The unfavourable signs were, an increase of muscular debility, oppression, anxiety, incessant vomiting, a rapid increase of the icteritious aspect, restlessness, frequent sighing, costiveness, or bloody stools, accompanied with a painful tenesmus, hollow eyes, shrunk countenance

nance, shrill voice, obstinate pervigilium, but, above all, an invincible irritability of the stomach, which prevented it from retaining any kind of drink, aliment, or medicines, and a gradual recession of heat from the surface of the body.

In the third and last stage, the favourable symptoms were, a return of heat to the surface of the body, cessation of delirium, and a change of colour in the matter discharged by vomiting. The symptoms in this stage, which chiefly denoted a speedy dissolution, were the sudden cessation of pain and fever, coldness of the face and limbs, black vomiting, black stools, constant singultus, coma, hæmorrhagy, a sense of great weight and stricture about the epigastric region, deep and frequent sighing; and a great failure of strength.

In treating of the method of cure, Dr. Currie very judiciously observes, that no one mode of treatment could, with propriety, be pursued in every case; but that it was requisite to vary it, particularly as the symptoms indicated, from the beginning, an inflammatory or putrid tendency; as well as to adjust it to the several stages of the disease. In all cases,

cases, when the activity of the arterial system was evidently increased, and when the head and epigastrium were much affected, blood-letting very generally afforded relief; and this operation was found serviceable, when repeated every six or eight hours, for the first twenty-four or thirty-six hours, after the establishment of the paroxysm.

In conjunction with blood-letting, mercurial purges were found more certain in their effects, and more serviceable than any other; especially when calomel was exhibited in doses, from six to twelve grains, repeated every six or eight hours, till a copious discharge took place.

The difficulty of retaining saline purgatives, and the very great difficulty of procuring copious evacuations by stool, without which the topical affection obstructing the passage of bile could not be removed, nor the propensity to vomiting relieved, made calomel preferable to any other. For, notwithstanding the inflamed and irritable state of those parts, it readily passed the pylorus, occasioning less irritation, till it reached the in-

testines, and being less liable to be rejected by vomiting than any other purgative.

The most difficult part of the treatment in this disease, consisted in putting the stomach in a condition to retain any thing. Nothing so certainly produced this effect as a copious diarrhœa, when it could be procured; and, with this view, nothing succeeded so well as calomel.

When, on the first or second day of the disease, the face was greatly flushed, the vessels of the tunica adnata very red and turgid, and the patient affected with delirium, he generally died in a short time, unless copiously blooded and purged. With these, it is perhaps needless to observe, were conjoined cleanliness, cool air, the most abstemious diet, refrigerant drinks, and every other part of the antiphlogistic regimen.

When these measures, however, failed in alleviating the urgent symptoms, particularly the vomiting, blisters applied to the stomach, the legs, or the inside of the thighs, had sometimes a good effect, especially when purging clysters were at the same time employed. O-
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pium, in place of relieving the vomiting, was very generally found to aggravate it.

When, in the second stage of this fever, the inflammatory state verged towards gangrene, the weakness was such as to render bleeding inadmissible, and the irritable state of the stomach precluded all expectation from purgatives, as they were rejected, as well as every thing else, the instant they reached the stomach. Then the only resources were, warm fomentations to the region of the stomach, the application of blisters, the frequent exhibition of laxative clysters, and, after free evacuation by means of these, the injection of Peruvian bark with laudanum.

We have thus endeavoured to give a short view of the most important particulars in the treatment of this disease, recommended by Dr. Currie; but although he considers the practices now pointed out as most generally applicable, yet he observes, that when this disease began, which was sometimes the case, with great prostration of strength, and other symptoms which denote a typhous diathesis, wine was found not only to be safe, but more useful than any other article. And in these

cases, he tells us, that the early use of Peruvian bark, in various forms, together with laudanum and volatile salts, were of service. But the practice which in such instances he found most beneficial, was the shower-bath of salt water, applied quite cold three times a day ; the patient sitting in an arm-chair, in a large tub for the purpose, his head being previously shaved, or covered with a thin bathing cap of oiled cloth. But when black vomiting, and coldness of the limbs, were the most predominant symptoms, all attempts to relieve were, he observes, very generally ineffectual.

We have thus endeavoured to present to our readers a brief account of the most important practical observations, made with respect to this disease, by three intelligent and industrious practitioners ; and although we must acknowledge, that, while to us some of the theoretical opinions maintained upon the subject appear to be very erroneous, and there are among these writers not a few contradictions, even with respect to facts, yet it can hardly be denied, that there is such a general coincidence, as to establish the utility of certain
practices

practices. There cannot be a doubt, that all the various symptoms of this disease, too frequently terminating fatally, were effects produced by a foreign contagion introduced into the body. And it would seem, that one of the first and most alarming of these effects was the induction of a peculiar inflammation, more especially in particular parts. It is well known, that other foreign contagions, inducing disease in the human body, as those of small-pox, measles, chincough, influenza, and the like, act more especially, and in a very peculiar manner, on certain parts, some on the surface, others on the lungs ; and, in this disease, though the appearances, which have been discovered by the most accurate dissection, do not by any means ascertain the cause of the great mortality of the disease ; yet to us they seem to shew, that its peculiar contagion acts in a more especial manner on the stomach, the lungs, and the brain. There is good reason to believe, that its first effect on these organs is the induction of a certain state of inflammation ; and it is probably by alleviating or removing these or other effects of the contagion, that the prac-

tices found beneficial have produced their good effects.

Although blood-letting seemed to be productive of bad effects in the West Indies, at a time when the heat of the atmosphere was very great, and when the tendency of the inflammation to the gangrenous or putrescent state was very strong, yet, from the concurring testimony of different practitioners, there can be no doubt, that it was found highly useful in America, particularly when, during the continuance of the epidemic in Philadelphia, the weather became colder. Powerful cathartics, particularly mercurial ones, were found highly beneficial in every situation, both as alleviating the violence of the affection, and mitigating the most distressing symptoms. And a strict observance of every part of the antiphlogistic regimen seemed very generally to be productive of benefit. When, however, from the induction of a salivation, there was certain evidence of mercury having been fully introduced into the circulating system, and existing there in an active state, it would appear that the disease almost universally yielded to the remedy.

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This at least seems to us to be confirmed by what we reckon indubitable authority. Is there not, therefore, some room for conjecturing, that while other practices may have been useful, as counteracting and diminishing the effects of the contagion, mercury may have contributed to the cure of the disease, by destroying the activity of the contagious matter? Its influence in the cure of syphilis gives at least some countenance to this supposition. For although it cannot be represented as destroying the activity of every contagious matter, yet there can be no doubt that it counteracts some others as well as that of syphilis.

We do not indeed offer this opinion on any other footing than that of mere conjecture. But it is rested at least on such grounds as may lead those practitioners who have hereafter the misfortune to meet with this epidemic, to give a fair trial to mercury, copiously introduced into the system in the most speedy manner; and particularly under the form of extensive friction, both of the inferior extremities, and likewise of other parts of the body. This, however, as well as many other particulars respecting this disease, can

be ascertained by future experience and candid observation alone. And much yet remains to be ascertained. For the vain idea, that a fixed principle in medicine is already discovered, by which we can triumph over this formidable disease, is completely refuted, with every man of common understanding, by the deplorable mortality of which it was lately productive at Philadelphia. This mortality clearly demonstrated, what indeed few practitioners of candour and integrity will deny, that medicine, notwithstanding its late boasted improvements, is still at best but an uncertain and a conjectural art.

X.

Heinrich Matthias Marcard, Herzoglich Hollstein Oldenburgischer Leibmedicus zu Oldenburg. der Konigl. Societat. der Wissenschaften zu Gottingen, zu Copenhagen, & zu Edinburg, Mitglied, &c. Ueber die Natur, und Gebrauch der Bader. 8vo. Hanover.

THE author of this work is already well known, on account of several excellent publications in medicine. Intending to write an history of the mineral baths at Pyrmont, where he has practised for some years, he was naturally led to consider the effects of bathing in pure water. But, upon consulting the authors who have treated of this subject, he did not find, either in the works of his own countrymen, or of foreigners, any thing very satisfactory. Their accounts were commonly hypotheticalal, and the facts and observations of some were in direct opposition to those of others.

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Since the subject, therefore, was involved in such obscurity and uncertainty, Dr. Marcard was induced to examine more minutely the effects produced on the human body by bathing in pure water. By the useful remarks which he derived from the works of others, and from his own observations and experiments, what he collected on this subject increased to such a size, as to induce him to publish it separately.

Of a work of this kind, the professed intention of which is to give a complete and circumstantial account of the subject of bathing, and which therefore must necessarily involve minute details of matters already known to most of our readers, it would be superfluous to give a very full analysis. We shall here, therefore, confine ourselves either to what is most important on the subject, or to what is most peculiar in the opinions and observations of our author.

Dr. Marcard begins by dividing baths into four classes, and by assigning to each class a certain range of the thermometer. The term hot bath comprehends every degree above 96 in the scale of Fahrenheit. The limits of
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what he calls the warm bath he fixes from 96 to 85. Those of the cool or tepid bath from 85 to 65. And all below this he calls the cold bath. admits, that a classification which derives its names from the sensations of mankind, as these vary in almost every individual, must naturally be ambiguous. Yet it is, he thinks, of the utmost consequence, in every investigation, that the ideas affixed to each word should be accurately defined; and the philosophical spirit which has lately been introduced into the science of medicine demands this accuracy. One great source of the contradictory accounts of authors, respecting the effects of bathing, has, he thinks, arisen from not defining, with sufficient precision, the terms used.

Dr. Marcard begins with the history and effects of the warm bath. No opinion, he remarks, has been more commonly spread among the vulgar, and no one more universally adopted by medical writers, than that the warm bath relaxes the simple fibre, and debilitates the living fibre. The known effects of heat, and of heat conjoined with moisture, the constringing and tonic effects of its opposite,

fite,

sive, cold bathing, and the writings both of poets and historians, have contributed to confirm this opinion. Dr. Marcard, however, here ventures to call it in question.

He observes, that the universal practice of using the warm bath among all eastern nations, from the earliest accounts we have of them (a practice which is now interwoven with their religion), would lead us to think, that warm bathing is not so debilitating as has been supposed. And that this was the opinion of the ancients, may be inferred from the warm baths being dedicated to Hercules, to whom, according to their mythological accounts, Pallas discovered them when he was tired driving the oxen of Geryon through Sicily.

Some experiments have indeed been made on dead animal fibres, in favour of the relaxing power of the warm bath. But reasoning from these is, he thinks, inapplicable to the living body, from the different circumstances in which each is placed. The living animal fibre has no empty pores, which absorb the surrounding fluid. On the contrary, it contains an oleaginous fluid, which repels water.

ter. The more interior fibres are constantly surrounded with a fluid which is heated to 96 degrees. The effects of warm bathing, therefore, cannot, he observes, reach farther than the skin, or the parts immediately beneath it.

But, independent of all theoretical reasoning, Dr. Marcard's observations, from actual practice, led him to think, that the effects of warm bathing on the living human body are not debilitating. At Pyrmont, during sixteen years, he has had occasion to see several thousand sick persons make use of the warm baths. A great many of these were naturally of delicate and weak constitutions, and some of them were much debilitated by disease; yet, by the use of the warm bath, many of them were restored to their former strength, and none of them complained of its debilitating effects. On the contrary, they felt themselves stronger on the days on which they used it. This could not be attributed to the chemical ingredients of the Pyrmont water, since Dr. Marcard was in the habit of prescribing bathing in common water, heated to the same temperature as that of the Pyrmont baths, and
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observed the same effects from the former as from the latter. In confirmation of this, he relates the case of a lady, who had for three years been in a very bad state of health, and at last became so weak, that she was unable to turn herself in bed without assistance. She had taken Peruvian bark, and a variety of other tonic medicines, without receiving any benefit. As the last resource, the warm bath was prescribed. It was employed every second day, and almost from the first time of using it she felt herself stronger. In the space of two months she was perfectly cured.

But while Dr. Marcard thus endeavours to prove, that the common opinion, respecting the debilitating and relaxing powers of the warm bath, is not well founded, he does not deny that these effects do sometimes happen. Cases of this kind occur in many authors, and he has seen several of them himself. But such effects cannot, he thinks, be ascribed to the immediate action of the warm bath, but to a certain peculiar irritability of the nervous system, or to the warmth of the bath favouring the action of a colder atmosphere. The error of authors, in ascribing debilitating effects

to the warm bath, arises, Dr. Marcard thinks, from their confounding it with the hot bath.

It is the opinion of most of the moderns, that the warm bath increases the temperature of the body. But the ancients did not think so, as it was prescribed by Hippocrates and Galen, in inflammatory diseases. Dr. Marcard ascribes this mistake of the moderns to their not having sufficiently distinguished between the hot and the warm bath. The beautiful experiments of Drs. Fordyce, Blagden, &c. in heated rooms, shew that the human body can support an astonishing degree of heat, without its own heat being increased. But this, Dr. Marcard observes, is not the case when water is the medium through which heat is conveyed to the human body. By the heat of water at 112 degrees, the pulse becomes quicker, the sensation of heat is great, and the actual temperature of the body is increased several degrees, as appears from the experiments made by Dr. Parr. But in the warm bath, the heat of which does not exceed 96 degrees, he affirms that the heat of the body is not increased. He has not, however,

however, related any experiments on this subject.

Authors have differed much in their accounts of the effects of warm bathing on the pulse. To be able, therefore, to determine truth amidst contradictory accounts, to remedy the want of accurate observation, and to see if the effects of the warm bath followed any determined and fixed law, Dr. Marcard was induced to make some experiments on this subject. These, to the number of twenty-five, are related in this treatise; and they appear to have been made with great accuracy, and due attention to all the concomitant circumstances. As they do not, however, admit of an abridgement, we shall here confine ourselves to the conclusions drawn from them, which are the following.

1st. Every bath, the temperature of which is under 96 degrees, diminishes the velocity of the circulation.

2^d. The more the pulse deviates from a state of health, the more it is diminished in quickness by the warm bath.

3^d. The degree of heat of the warm bath, which appears to have the greatest effect, in
diminishing

diminishing the morbid frequency of the pulse, is between 96 and 85 degrees, which are therefore the limits which have been assigned to the warm bath.

4th. The longer the bath is continued, the slower does the pulse become. Dr. Marcard reduced his own pulse in an hour and a half to fifty-four beats in a minute. But what the period of time is at which the warm bath ceases to have this effect, has not yet been determined.

5th. Although it may be assumed, as a general law, that the warm bath diminishes the frequency of the pulse; yet so far is this diminution of frequency from being in direct proportion to the diminution of heat, that it appears the same temperature had not at all times the same effect on the same person, far less on different persons. In one case only, however, he found that the warm bath increased the velocity of the pulse.

Nature, Dr. Marcard observes, has afforded various means of increasing the velocity of the circulation; but she has given us very few by which it can be made slower. He therefore very properly calls our attention to the above effect of warm bathing, in the cure of

diseases, as it is a remedy which is much milder, and more easily managed, than any of the medicines called sedatives. Fevers, he observes, naturally present themselves as the first disease, in which we should, *a priori*, conceive them to be most useful. Here, however, Dr. Marcard merely informs us of what the ancients, and some moderns, have written and thought on this subject, without pointing out from his own experience either the particular kinds of fever, to which the warm bath is best adapted, or the particular periods of the fever, at which the greatest benefit may be expected from the use of it. A proper knowledge, therefore, of the use of the warm bath in fevers, still remains to be investigated.

Dr. Marcard next presents us with a learned account of the use of the warm bath in small-pox, from which he shews that it was frequently used in this disease, from its very first appearance in Europe. But more seems to have been said of it from theory than from actual practice. He gives us an account, however, of a small district in Hungary, situated among the Carpathian hills, which is an exception to this. There, as soon as a child falls sick, when there is reason to suspect that

that the sickness arises from the infection of the small-pox, it is instantly put into a warm bath of pure water. As soon as it comes out of the bath, it is wrapt in warm linen and put to bed. This practice is continued twice a day, from half an hour to an hour at a time; even after the pustules come out, and until their maturation. The same practice is afterwards still continued; but instead of the pure water, whey is used, or if it cannot be procured, milk and water in equal proportion is substituted. During the disease they give no medicines; milk is the only thing prescribed. This practice, Dr. Fischer of Erfurt, who gives a particular account of it, represents as so successful, that during a very fatal epidemic small-pox which happened in the year 1727-28, in many of the villages where this method was adopted, none died; while in those where a different method of treatment was followed; there were numerous deaths. Dr. Fischer followed this practice himself; and he found, that by means of it the violence of the disease was diminished, the headach relieved, the thirst quenched, and the itching of the skin prevented. He adds, that he ne-

ver saw a child die of the small-pox who used the warm bath properly.

Dr. Marcard gives a particular account of two cases in which he directed the warm bath in small-pox. In both it had considerable influence in diminishing the celerity of the pulse and the heat of the body. In both, the pustules appeared soon after the warm bath was used; but they were numerous, and the children were in great danger. After relating these histories, he points out at some length the symptoms which indicate the employment of the warm bath, and the intentions with which it may be used in the small-pox. On this subject he presents us with the following observations.

1st. The warm bath may be used before the eruption of the small-pox, with the intention of taking off the determination of the variolous matter from the face. Dr. Marcard, in his own practice, constantly uses Tipot's method, who orders partial warm bathing of the feet after inoculation; and he thinks there are always more pustules in proportion on the parts bathed, than on the rest of the body.

2d. Before the eruption, the warm bath may be used to alleviate pain, anxiety, and restlessness. The convulsions, which in children often precede the eruption, are very generally relieved by the warm bath, unless they arise from some irritation in the intestines.

3d. The warm bath has been recommended before the eruption of the small-pox, with the intention of accelerating it. But it may, Dr. Marcard thinks, be a question, how far this is proper, since it is found, that the longer the eruption is of appearing, the milder is the disease.

4th. After the eruption, the warm bath is used to diminish the heat and pain arising from the inflammation of the pustules. Dr. Marcard has never tried the warm bath with this intention, but he thinks it deserves a trial. Inconveniences may indeed, he observes, arise from the clothes adhering to the skin; but this he proposes to prevent, by rubbing the parts on which the patient lies, with some oily substance.

5th. About the period of the evanescence of the pustules, the warm bath has been ad-

vised, to promote the falling off; and Dr. Marcard thinks that it lessens the chance of pitting.

But although Dr. Marcard contends, that in many cases the warm bath may be used in every stage of the small-pox with advantage, yet he thinks, that it would be improper in cases where the disease is accompanied with typhous fever and petechiæ.

Dr. Marcard next makes some observations on the use of warm bathing, in what he calls the nervous fever. As he employs this term in a different sense from some other authors, he very properly gives a description of it. It is attended with a quick pulse, and this celerity is much increased on the slightest exertion. The patient has often an uncommon degree of vivacity and spirit, but is unable to sleep. There is a very disagreeable sensation of heat and burning on the surface of the body. This disease lasts for several months, and is frequently mistaken for consumption. It occurs frequently at Pyrmont. The cold bath and tonics afford no relief; but Dr. Marcard tells us, that he has found the greatest advantage in this disease, from the use of the warm bath.

bath. He began first with the warm bath of pure water, and in general he found, that the cure proceeded so fast, that in fourteen days he could order bathing in the mineral water. He concludes his remarks on this disease with relating the case of a man, whose habit was very irritable, with his pulse above 100 in the minute. He was directed to use the warm bath every second day. After the fifth bath, his pulse was reduced to the natural standard of 70 beats in a minute; and in a short time his cure was completed.

If the body be weighed after coming out of the warm bath, it will be found to have increased in weight. Some of the water has therefore been absorbed. It is evident also, that during the bathing the perspiration has been increased, and the perspirable matter is mixed with the water. To determine precisely the actual quantity of the perspirable matter, which is thrown out, and of the water which is absorbed, is very difficult, perhaps impossible. In statical experiments, the balance does not give the actual quantity, either of the perspiration or of the absorption, which has taken place in a limited time. It shews only

difference between the two. The difficulties increase when the experiments are made with the warm bath, as it is almost impossible to observe minutely the given quantity of water which is evaporated, or that which adheres to the skin, or which is otherwise lost. The experiments, however, of Dr. Falconer, on this subject, are perhaps the most accurate. Dr. Marcard has not added any experiments of his own, but taking those of Dr. Falconer as a basis on which to calculate, he thinks, that in a warm bath of one hour's duration, the quantity of perspired matter may be one pound, and that of the water absorbed may amount to four pounds.

Besides the effect of the warm bath, as increasing the quantity of the circulating fluids, it is probable, Dr. Marcard thinks, that it has also some other effects upon the fluids. The pathology of the fluids is still so obscure, that we hardly know the changes which take place in them in disease. But Dr. Marcard is inclined to think, that the good effects of warm bathing which he has observed both in scrophula and in various cutaneous eruptions, depend upon a diminution of the acrimony
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of the fluids, which he considers as the cause of these diseases. To the same diminution of acrimony Dr. Marcard is inclined to ascribe the powers which certain waters have, of bringing out eruptions on the surface of the body, as it is often the effect of waters which have no mineral impregnation.

Warm bathing has some effects upon the skin to which it is immediately applied. Besides cleansing and softening it when hardened, it appears to promote the renewal of the skin, as is evident from the immense quantity of scales which fall off during the first baths. This effect may be of use in some affections of the skin itself, and in increasing its sensibility.

After this full account of warm bathing, Dr. Marcard next makes some remarks on the hot and on the vapour bath. But as his opinions respecting these differ little from the sentiments of others, we shall not offer any analysis of them.

On the cold bath, Dr. Marcard is very particular. It were, however, to have been wished, that he had made more experiments on the effects of cold bathing on the pulse, as
authors

authors differ in their accounts of this. Only two experiments occur in Dr. Marcard's book. In a bath at 63 degrees, he found the pulse reduced from 80 to 70 beats in a minute; and in one of 60 degrees, he found that the pulse became two beats quicker after the bath than before it. Dr. Athill, whose experiments are quoted by our author, found that the cold bath at first made the pulse quicker, but afterwards it became slower.

Upon the whole, this work of Dr. Marcard's is an excellent collection of all the observations and experiments of preceding authors; and contains also many good observations of his own. It might, however, have been improved, by more facts and cases of disease, in which bathing has been employed with advantage. But this defect he promises to supply, in a treatise on the Pyrmont baths, to which the present work may be considered as an introduction.

XI.

A Treatise on Sol-lunar influence in Fevers, &c.

By Francis Balfour. Vol. I. 8vo. London.

THE learned and ingenious author of the treatise now before us has already favoured the public with several other publications on the same subject. Of these our readers will find some account in former volumes of this work. In the treatise now before us, the author endeavours to afford additional confirmation of the doctrine which he then delivered. After a residence of two or three years in Britain, during which time the publications formerly alluded to appeared, Dr. Balfour again returned to Bengal, where he had formerly practised with high reputation for a considerable time. The additional observations which he has of late had an opportunity of making, have afforded him fresh evidence of the truth of his former doctrine.

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In the volume now before us, we are presented with part of the result of those observations; and the author promises a continuation of them in two future volumes. His object in the present volume is to establish the reality of sol-lunar influence, upon such evidence, that it may no longer be a matter of doubt, but that future inquirers may proceed directly to investigate the particular laws and restrictions under which it acts upon the human frame.

In the second volume, the author pledges himself to explain the periodical attacks and remissions of fevers, their various types of quotidian, tertian, &c. their transitions from one type to another, and a variety of other curious phenomena, which have hitherto eluded the investigations of physicians, in a manner that shall carry along with it a perfect conviction of its truth to every man of candour and sense, who shall take the trouble to examine it. An endeavour to apply the knowledge we have thus obtained, to reform the theory, practice, and language of medicine, and to shew in what respects these may be still farther improved, by applying it to prosecute

cute new discoveries, will, he tells us, furnish matter for a third volume.

To obtain such facts as might furnish decided proof, either of the reality of sol-lunar influence, or the contrary, Dr. Balfour wrote the following letter to many of his friends in different parts of India.

“ Dear Sir,

“ From several observations made within these few years, in different parts of the world, some attempts have been made, to revive a doctrine of very great antiquity in medicine, viz. that in fevers, and also in other diseases, the human body is affected in a considerable degree, by an influence connected with the revolutions of the sun and moon.

“ Amongst a variety of facts induced in support of this doctrine, the following, being analogous to the phænomena of the tides, appear to be the most striking and conclusive :

“ 1st. That the paroxysms of fevers shew themselves in a greater degree of violence about the full and change, that is to say, about three days and an half before and after,
including

including at each period a space of about seven days, than during the interval between these periods.

“ 2d. That the paroxysms of fevers, occurring during the periods described, are constantly more violent about mid-day and midnight (that is to say, in the space included between half after eight in the morning and half after three in the afternoon, and between half after eight in the evening and half after three in the morning, including at each a space of about seven hours), than during the intervals between these spaces.

“ 3d. That some remarkable abatement, in the violence of paroxysms, never fails to take place upon the expiration of the full and change.

“ 4th. That the paroxysms of fevers, whilst they abate in violence upon the expiration of the full and change, shift also their accession or attack to a later hour.

“ Various other circumstances and arguments have been stated, and one gentleman says, that his observations of sol-lunar influence have not been confined to fever, but that epilepsy, insanity, paralytic affections, headachs,

headachs, inflammation of the eyes, asthmas, pthifical coughs, pains, and swellings of the liver and spleen, gouts, rheumatism, toothach, diarrhœas, colics, costiveness, complaints in the urinary passages, boils, ulcers, sores, and eruptions of different kinds, often assumed an intermittent form, and returned regularly with the full and change of the moon; and disappeared or diminished during the intervals. He had also conceived, that the hemorrhoids, the fits of teething in children, and the delivery of women with child, are directed to happen more frequently at these periods than during the intervals, by the same law.

“ To determine whether there actually exist in nature a general law of so great power, or whether it be merely the phantom of a few individuals, must certainly appear to every man of sense and candour to be a matter of consequence, not only to medicine, but to every branch of natural knowledge.

“ From this persuasion, I have been induced to undertake the collection of all the information I can obtain on this subject; and flattering myself, that every lover of science will be ready to assist me with his testimony,

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as far as it goes on either side of the question, I have taken the liberty of requesting the communication of any facts that may appear to be connected with my present object.

“ That my history of facts may be as fair and impartial as possible, I must also request your permission to publish whatever you communicate in your own words, and with your own name annexed.

“ I hope I shall have the pleasure of hearing from you soon, and shall consider every observation with which you may favour me as an obligation.

I am, &c.

FRANCIS BALFOUR.”

To this letter Dr. Balfour received answers from upwards of sixty different persons, among whom were many of the most eminent medical practitioners in Bengal, Drs. Campbell, Bruce, Fontana, Wade, Hare, Boyd, &c. tending strongly to corroborate the doctrine. Of their observations, however, we cannot propose to give any particular account. And we shall content ourselves with laying
before

before our readers Dr. Balfour's general statement of the facts

From a review of the authorities, he concludes, that almost the whole of them concur in affirming the truth of the following observations, that the relapses and exacerbations of remitting and intermitting fevers happened much more frequently, at the springs about the full and change of the moon, than in the neaps.

This observation, he remarks, necessarily implies, that those who made it did observe the following separate and distinct facts.

“ 1st. That many relapses and exacerbations happened during the springs at new moon.

“ 2^d. That few relapses and exacerbations happened during the neaps following new moon.

“ 3^d. That many relapses and exacerbations happened during the springs at full moon.

“ 4th. That few relapses and exacerbations happened during the neaps following full moon.

From a considerable number of the au-

thorities, as well as from his own experience, and the testimony of many with whom he has conversed, Dr. Balfour infers, that confirmation is afforded of four other facts, viz.

“ 5th. That during the springs, many paroxysms come on about the middle of the day, viz. between half past eight a. m. and half past three p. m.

“ 6th. That during the springs, few paroxysms come on in the evening between half past three p. m. and half past eight p. m.

“ 7th. That during the springs, many paroxysms come on about the middle of the night, viz. between half past eight p. m. and and half past three a. m.

“ 8th. That during the springs, few paroxysms come on in the morning between half past three a. m. and half past eight a. m.”

Although the tendency of fibrile paroxysms to postpone their attacks is supported only by a few observations in Dr. Balfour's collection, yet even from these, corroborated by the evidence which they derive from their close connection with other facts, he thinks

he may with confidence add, as another conclusion,

“*9th.* That during the springs and neaps, the paroxysms of fevers have a tendency to postpone the hour of attack, at each succeeding return, in coincidence with the tides.”

Dr. Balfour observes, that by establishing and discriminating those nine different facts, it will not escape the observation of those who are at all acquainted with the present state of medical science, that we have acquired the knowledge of no less than nine different remarkable coincidences, between certain phœnomena of fevers and certain periods of time, hitherto overlooked and unknown in medicine and natural philosophy. And, upon the whole, he concludes, that the dominion of sol-lunar influence over fevers is now demonstrated, and ought no longer to be considered as a matter of doubt; but that future inquirers should directly proceed to investigate the particular laws and restrictions, under which it acts, for the purpose of improving our knowledge and skill in useful arts.

From the numerous facts which Dr. Bal-

four has collected, there can now, we imagine, remain no doubt, that in the kingdom of Bengal, either a return or an increase of the fevers are frequently observed, both about the time of full and likewise of new moon. But that this arises from a general law of sol-lunar influence, extending over the whole globe does not yet appear to us to be by any means ascertained. If such a law really existed, we should naturally expect to find most of the deaths from fevers taking place, either about the full or change of the moon. This, however, was by no means the case during the fatal fever of Philadelphia, of which we have given an account in the present volume. There, during a period of three months, the number of deaths had a regular increase and decline, without being in any degree affected at particular periods by sol-lunar influence. This subject, however, may be justly considered as well meriting the future attention of practitioners in every country. And we apprehend, that an exact register of deaths from fever would ascertain, with greater accuracy, whether such an influence does or does not

exist, than the circumstances either of the increased severity of paroxysms, or even of the day of the recurrence of fevers, respecting both which, patients themselves, as well as practitioners, may often be deceived.

XII.

A Practical Essay on a certain Disease of the Bones, termed Necrosis, illustrated with six plates. By James Russell, F.R.S. Edin. Fellow of the Royal College of Surgeons, and one of the Surgeons of the Royal Infirmary, Edinburgh. 8vo. Edinburgh.

THAT disease of the bones, termed Necrosis, which is the subject of the present essay, displays, in a very remarkable degree, the power of reproduction which nature possesses. In this disease new parts are formed, in a manner very curious, and with a degree of perfection altogether extraordinary. For, after the entire loss of the original bone, the formation of a substitute one enables the patient to perform all the usual functions of the limb, without any sensible inconvenience or difficulty. And it is a very remarkable circumstance, that, in favourable instances of the disease, the power of motion

is

is preserved, during all the time these changes are going on. In this respect, necrosis differs from all other cases of renovation; and the four following circumstances may be considered, Mr. Russell observes, as fully established in cases of necrosis. “*1st*, That the new
“ bone is formed and consolidated before the
“ old one separates; *2^{dly}*, That it surrounds
“ the old bone; *3^{dly}*, That it is larger in size;
“ and, *4^{thly}*, That it is only equal to the old
“ bone in length.”

In this disease, the old bone serves as a mould for the new one; and the first step of the process is to surround the old bone with an effusion which seems to be of a gelatinous nature. This effused stratum gradually acquires an additional degree of consistence, after which ossific nuclei make their appearance in different places, and quite distant from each other. They increase in number and enlarge in size, till at last they come into contact and unite together, so that the whole of the effused stratum is converted into a mass of bone. This new bone is completely organised, and has all the properties of a bone of the most perfect structure, but is not disposed

fed into the same regular lamellæ with the primitive bone. In the formation of this new bone, at the time of the effusion, all the tendons, being in their natural situation, are surrounded and fixed by the gradual consolidation and ultimate conversion of the effusion into solid bone; and in this manner is the insertion of the muscles transferred from the old to the new bone. The dead portion of the old bones, which separates from the living parts, and is supplied by the new bone, has been distinguished by the name of the *Sequestra*.

After this general view of the nature of necrosis, Mr. Russell proceeds to inquire into the origin of this osseous shell, and into the circumstances which occasion its formation. Contrary to the opinion of Mr. Du Hamel, and those physiologists who have adopted his hypothesis with regard to the formation of bones, Mr. Russell thinks it proved almost to a demonstration, that the original periosteum has no share whatever in the formation of the new bone. This he thinks clearly proved by cases of compound fracture, where the cure goes on upon the principle
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of a case of necrosis ; by cases where part of a bone has been replaced, after being carried away, together with the periostium ; and finally by cases where a new bone has been formed, notwithstanding the total destruction of the original bone and its periostium.

From a consideration of every circumstance, he thinks it appears that the pulpy mass, which extends from one portion of the bone to the other, and is itself at last converted into bone, is entirely a new creation, and has no dependence either on the original bone or its periostium.

Mr. Russell next inquires into the causes which occasion the formation of the new osseous shell. From some curious and interesting experiments, instituted by Mr. Troja, he infers, that the death of a portion of bone, and the destruction of the marrow, is one never-failing cause of necrosis. But from different cases, which have fallen under his own observation, he thinks it proved, that the substitute bone may be far advanced in its formation before the sequestra dies, or the marrow be destroyed. He infers, therefore, that although the death of a bone, from the destruction

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tion of the marrow, may be one cause producing an attack of necrosis; yet that is by no means the sole or indispensable cause. Inflammation, he remarks, always precedes necrosis; and many different causes may, he thinks, excite that kind of inflammation which terminates in necrosis. The probability, he thinks, is, that the effects of the inflammatory attack have a double operation, and are the source, both of the death of the old bone, and of that state of action, which gives birth to the generation of the substitute. The foundation, therefore, of both processes, the one terminating in death, the other in reproduction, would seem to be laid at the same time, and to depend on one common cause.

Mr. Russell next presents us with a particular history of the principal symptoms in necrosis; and he here offers many important remarks respecting the pain, the enlargement of bone, the suppuration, the ulcerations, and the discharge of spiculæ of bone, which are observed in this disease. The state of the sequestra also, the period of their separating, their dissolution, and the separation of joint, are objects of consideration.

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In treating of the feat of necrosis, Mr. Russell observes, that this disease does not attack all the bones of the body promiscuously. It is the long bones which are chiefly liable to be attacked; and excepting the lower jaw, none, perhaps, of the irregularly shaped bones become the subject of necrosis. Of all the bones, the tibia is the most frequent subject of necrosis; and the next, perhaps, in point of frequency, are the femur and lower jaw.

With respect to the duration of this disease, Mr. Russell observes, that, from different circumstances, it is very variable. A cure, he tells us, may be completed in less than three months from the first moment of the attack. But in general a much longer time is required; and cases of necrosis of the tibia have been five or six years of completing their course. It therefore appears, says he, that necrosis is a tedious, though not properly a chronic disease.

Necrosis is properly a disease of the earlier periods of life. Excepting when it took place in the lower jaw, Mr. Russell has never known a case of it in which the attack began after the twentieth year; and he never
heard

heard of a case in which it began at an earlier period than six years of age.

Of the causes of necrosis, Mr. Russell observes, that no satisfactory account can be given. But, independent of its connection with age, he is inclined to believe, that it more readily attacks those who have a scrophulous taint in their constitution, than others. In many cases, necrosis is not referable to any external cause. The cases of necrosis which originate from external injury, according to Mr. Russell's observation, generally occur in the lower jaw. As taking place in that bone, it may often be traced to the effects of blows, of toothach, of salivation, of small-pox, and the like.

Necrosis is in some danger of being confounded with a general enlargement of the bone, with exfoliation of an external lamella, and with what has been termed a case of internal exfoliation. But simple enlargement of the bone is not necessarily or constantly attended with pain at the commencement of the disease, and its progress is more slow and gradual; nor are there any fistulous ulcers to discharge matter. In cases of exfoliation, besides

sides numerous other distinguishing symptoms, Mr. Russell observes, that the attack of the disease is much more limited in its extent, and not accompanied with any general swelling of the limb. If the bone be at all enlarged, it is only to a small distance above and below the ulcer; and then it is not surrounded by any swelling of the soft parts. With regard to internal exfoliations, though these frequently do affect the cranium, yet Mr. Russell has never met with an instance of this in the long bones. Those represented as internal exfoliations were, he thinks, decidedly cases of necrosis; and he has therefore no hesitation in excluding this from any consideration in the diagnosis.

With regard to the prognosis, Mr. Russell observes, that necrosis, though often a painful and tedious, is yet but very rarely a fatal disease. It is only from attacks upon the inferior extremities that fatal consequences are to be dreaded. And even under the most unfavourable circumstances, the worst alternative which can be presented to a patient's choice, is that of submitting to lose his limb, in order to save his life.

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The last subject which Mr. Russell considers in this essay, is the method of cure. Necrosis does not, he thinks, admit of relief from any general treatment of the constitution. The disease is totally local ; and is, he thinks, too deeply rooted to yield to any general remedy ; and he doubts much, whether any real benefit can be derived from the use of topical applications. The inflammation, he tells us, is always so deep seated, and often so severe, that no local treatment has power to prevent or to check it. The common practices, in cases of local inflammation, topical blood-letting, and cooling astringent solutions, have here little effect. At the commencement of the disease, however, no other practices are applicable ; and a trial of these is naturally suggested by the intensity and continuance of the pain ; especially as this trial cannot possibly prove injurious. It is, however, clear, that whatever degree of efficacy these means possess, they can be attended with advantage only at the incipient stage of the disease.

But if the attack be not at once subdued, art can do little more than to regulate its
course

course in some particular circumstances. When the safety of the patient's life is endangered from the extent and violence of the inflammation, before the new shell be formed, or the sequestra loose, and be ready to separate, any premature attempt to extract the sequestra by force would necessarily exasperate all the symptoms. The palliative practice, therefore, of applying emollient poultices, or warm fomentations, is all that the case then admits of. And if this treatment do not succeed, there is no alternative but amputation.

After the first period of danger is passed, the sole object of practice, throughout the whole course of the disease, consists in removing the sequestra at a proper time. But there are two opposite states of the complaint, in which any interference would certainly be prejudicial: First, where the sequestra is dissolving, without making its appearance externally, or giving any considerable disturbance to the constitution; and, secondly, when it is escaping from its confinement, without violence, and without much uneasiness. But in the intermediate state of the disease, where the presence of the sequestra is a perpetual source of
irritation,

irritation, an operation for its removal is requisite to bring about a happy issue. It is, however, Mr. Russell observes, a point of great nicety, to determine the proper time to perform the operation ; and on this subject he offers many judicious observations. He concludes, upon the whole, that whenever we are satisfied of the existence of a case of necrosis, and are, from the violence of the symptoms, convinced that the patient must expect a long continuance of suffering, with a tedious and uncertain cure, it is clearly of advantage to operate early ; as we thus not only abridge the duration of the patient's distress, but, from the superior softness of the bone, we operate with greater facility.

When the exposure or protrusion of the sequestra removes all uncertainty as to the nature of the case, an operation is very generally adviseable, to accelerate its removal, and in some cases to save the patient's life.

But although, when the existence of the disease is clearly ascertained, and the irritation produced is considerable, a practitioner can hardly be too early in performing the operation ; yet sometimes, either from negligence

gence or want of opportunity, the complaint may be allowed to proceed to an imprudent height. This, however, is no reason for withholding the assistance of an operation ; for although it may prove less effectual than could be wished, yet it will neither accelerate the progress, nor aggravate the severity, of the case.

In place of the extraction of the sequestra, some have proposed that it should be dissolved ; and for this purpose the injection of the muriatic acid, in a diluted state, has been suggested. Against this proposal, however, Mr. Russell urges many powerful and judicious objections ; and he regards it as one of those speculative projects in surgery, which does not merit a trial in practice.

With respect to the operation to be performed in cases of necrosis, it is neither, he observes, delicate nor difficult. It consists in extracting the sequestra, through an aperture in the new osseous shell. The first step is to lay bare the bone ; and although this may be done by the application of a caustic, yet Mr. Russell considers the use of the scalpel as preferable in every instance. The place, direc-

tion, and extent of the external incision, is to be determined by the number and situation of the fistulous openings in the skin.

A portion of the new bone, under one of these openings, sufficient to permit the surgeon to explore the state of the parts beneath, is to be laid bare. In this space an opening of the bone, which leads directly to the internal cavity, will probably be discovered. But if this opening be so narrow and irregular, that a probe cannot be made to pass, the next step is to bore a small hole in the bone, by means of a perforator. A bent probe is then to be introduced, to explore the state of the whole internal cavity. By proceeding in this manner, the surgeon has it in his power to ascertain all the circumstances which are requisite to be known, previously to the last and most essential step of the operation.

After the superficial parts are removed as far as is necessary, the next step is to cut out a portion of the new-formed bone. This, before its complete consolidation, may sometimes be done by means of a strong sharp scalpell. But when the bone is too hard for this, Mr. Russell prefers making an opening
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by means of the trepan, to any other method that has been suggested ; for the gradual enlargement of the opening, leaves it in our power to stop whenever a sufficient width is opened to permit the extraction of the sequestra ; and at the same time affords an opportunity of judging how far any advantage may be gained by breaking down the sequestra into separate pieces. If it be of a large size, the extraction may be very much facilitated by this means. In general, it may be divided by means of cutting pliers ; but if it be too hard and solid to yield to them, it is always possible to remove a portion of it, by applying the head of a trepan.

For the fore after the operation, the most simple dressings answer the best. The whole limb should be covered with a large emollient poultice, which should be changed three times a-day. In general, in less than a week the bone becomes covered with granulations, which are of a more solid consistence than those arising from the common soft parts. After a healthy suppuration is established, a dressing of simple ointment may be substituted to the poultices ; and under this in time a perfect cicatrix will be formed. In cases of

necrosis of the tibia, the cure, from the removal of the sequestra till its final completion, will require from four to six months; and in other bones, a longer or a shorter time, in proportion to their size, and to the age of the patient.

At the beginning of the cure, the patient must be confined to bed, till the granulations have grown to the level of the surface, and have begun to receive a covering of skin. After this period, he may be indulged with greater liberty; but must at all times be cautious of over-doing, and must content himself at first with walking short distances, with his leg suspended in a sling. When the cure is finally completed, the affected limb is left larger and less shapely than the other; but in fulfilling all the useful purposes of life, its functions are not impaired.

To this valuable treatise, on a disease hitherto but imperfectly understood, Mr. Russell has added several engravings, which beautifully illustrate the progressive changes taking place in the formation of the new parts. And by his systematic view of the subject, he has laid the foundation of a solid improvement in future practices.

XIII.

Experiments and Observations on the Angustura Bark. By Augustus Everard Brande, Apothecary to the Queen. 8vo. London.

ALTHOUGH not many years have elapsed, since the Angustura bark was first introduced into Europe, yet from the benefit derived from it in actual practice, it is now extensively employed by several practitioners of the first eminence. The observations and experiments, therefore, which in the treatise now before us Mr. Brande has presented to the public, will naturally claim the attention of all those practitioners who wish to avail themselves of every important addition to the *Materia Medica*.

Mr. Brande begins this treatise by giving some account of the first appearance and reception of the Angustura. In the year 1788, a considerable quantity of this bark was brought by different ships from the West In-

dies to Britain. It was represented as having been found very superior to the Peruvian bark in the cure of fevers.

It was not alledged to be the product of any West India tree. It was at first supposed to have been carried to the West Indies from Africa. But, by letters from Dr. Ewer and Dr. Williams, of the island of Trinidad, which were published in the London Medical Journal, the public were informed, that it was the product of South America; and that the name of *Cortex Angusturæ* was given it from that of the place from whence the Spaniards bring it. Angustura, however, is merely a general term for a narrow pass between mountains. Different places to which this term is applied are to be found in the maps of South America, on the river Oroonoko; but there does not seem to exist any town or district of the name. And every endeavour to ascertain the exact place of the growth of this bark has hitherto proved unsuccessful. Of its natural history, therefore, we still continue to be completely ignorant. It has indeed by some been supposed to be the bark of that tree, to which the modern botanists have

have given the name of the *Brucea antidy-senterica* or *ferruginea*. But the remarkable difference, both in appearance and sensible qualities, between the *Angustura* bark and the dried bark of the *Brucea*, which now grows in the botanical gardens both at Edinburgh and at Kew, is an insuperable objection to this supposition.

There is a considerable variety in the external appearance of the *Angustura* bark, owing probably to its being taken from trees of different ages, and from different parts of the same tree. But in the taste and other properties they perfectly agree. The outer surface of the *Angustura* bark, according to Mr. Brande, when good, is in general more or less wrinkled, and covered with a coat of greyish white. Below this it is brown, with a yellow cast. The inner surface is of a dull brownish yellow colour. It breaks short and resinous. The smell is singular and unpleasant, but not very powerful. The taste intensely bitter, and slightly aromatic, in some degree resembling bitter almonds, but very lasting, and leaving a sense of heat and pungency in the throat. When reduced to pow-

der, it is not unlike that of Indian rhubarb. It burns pretty freely, but without any peculiar smell. By attending to the above description, adulterations of this bark, which have sometimes been practised, may easily be detected.

Mr. Brande, in relating his experiments on this bark, begins with those which tend to ascertain its chemical properties, and afterwards gives an account of the trials made for ascertaining its antiseptic powers.

A cold infusion he found to be very bitter, and to retain all the flavour of the bark. The decoction was exceedingly bitter, with a good deal of the flavour, but without the acrimony of the bark. With æther rectified, or proof spirit, it was found to give a strong tincture, of a deep yellow colour, impregnated with the entire taste of the bark.

No material change is produced in the colour of these preparations by the addition of vitriol of iron. Alkaline salts somewhat deepen the colour, and acids make it rather lighter. Both volatile and fixed alkalies, especially the caustic, extract from the Angustura bark a tincture of a very dark colour, between green
and

and black. Acids acted but little on it. Of all the menstrua which Mr. Brande tried, the dulcified spirit of nitre appeared to be the most powerful; the tincture made being very black, and apparently very saturated.

Eight ounces of the powder of this bark having been carefully acted upon, first with rectified spirit, and afterwards with distilled water, yielded 144 grains of pure resin, 300 grains of an acrid oily matter, and 1500 grains of dry gummous extract.

By infusion of the Angustura in distilled water, and successive crystallizations, various saline matters were obtained from it; and Mr. Brande gives the following table as exhibiting at one view the contents of eight ounces of the Angustura bark.

This quantity of the bark yielded,

	Gr.
Of essential oil - - - -	26
Gummous extract - - - -	1500
Pure resin - - - -	144
Acrid matter - - - -	300
Vitriolated tartar - - - -	48
Digestive salt - - - -	24
Salited lime - - - -	80

Selenite

	Gr.
Selenite of vegetable acid and lime	180
Magnesia - - - -	36
Argillaceous earth - - -	7
Vegetable acid - - - -	104
Calx of iron - - - -	6
Volatile alkali, about - -	32
Pure coal - - - -	284
Cubic inches of fixed air, about -	80

The next experiments related by Mr. Brande were made with the view of ascertaining the comparative powers of the *Angustura* bark in resisting or correcting putrefaction.

In these experiments it was compared with Peruvian bark, *Serpentaria*, Camomile flower, and Columbo root. Into the particulars of these trials we cannot here propose to enter. From these, however, it clearly appears, that the *Angustura* bark is fully equal, and perhaps even superior, in resisting and in correcting putrefaction, to the other very powerful antiseptics with which it is here compared.

To ascertain in which of the constituent parts this antiseptic power resides, Mr. Brande next relates some experiments which were performed at London by that ingenious

nious chemist, Mr. Sehmeiffer. From these it appeared, that the pure refin of the Angustura, not being soluble in water, has no antiseptic power at all, and that the acrid matter, combined with the gummy and saline particles in the extract prepared with boiling water, resists putrefaction the most; so that this extract must, Mr. Brande thinks, be considered as the best preparation for internal use.

The last part of this treatise consists of observations on the effects of the Angustura bark in particular diseases. But, before treating of these, Mr. Brande gives a short account of the dose and manner of exhibiting the Angustura. Of the powder he has given up to twenty grains every three hours, but generally less.

He employed this bark sometimes under the form of an infusion made with half an ounce of the bruised bark to a pint of boiling water; sometimes of a decoction, made with the same quantity of the Angustura, added to 24 ounces of water, and boiled away to sixteen.

The Angustura mixture, as he terms it, was made with seven ounces of the decoction

or

or infusion, with half an ounce of syrup of orange-peel, and two drams of compound spirit of lavender. The dose of this was from an ounce to an ounce and a half. The decoction he has also often given, to the extent of an ounce or ten drams, with one dram of syrup, and as much tincture of cinnamon. He recommends the following formula as furnishing a good compound tincture.

R Cort. Angustur. contus. unc. unam,

————Cinnam drachmas duas,

Croci scrupulum unum,

Spt. Vin. Gallic uncias octodecim stent sine calore per dies sex, vas subinde agitando dein fortiter exprime et filtra tincturam.

Of the aqueous extract, Mr. Brande considers ten grains as a full dose; and of the resinous, fix.

In treating of the effects of the Angustura bark in particular diseases, Mr. Brande begins with some observations on its use in dysenteries. He has himself had no opportunities of employing it in the contagious dysentery; but in the sporadic cases of that disease which occur in London, he has frequently seen it attended with great benefit. And he

relates

relates several cases in which it seems to have been productive of the best effects. He found it also very useful in cases of habitual diarrhoea. From what Mr. Brande saw in practice, it appeared to him, that the decoction or infusion answered rather better in bowel complaints than the powder.

As a febrifuge, the *Angustura* bark, Mr. Brande tells us, has shewn uncommon powers, and has been used in intermittents and other fevers with the greatest success. As agues are a disease in which the effect of a medicine are most clearly seen, Mr. Brande begins with relating some strong cases of these, which, after they had continued with obstinacy for several months, were completely removed by a few doses of the *Angustura*. In these it was in general given under the form of powder, in doses of ten, fifteen, or twenty grains. And Mr. Brande has here added to the cases which fell under his own observation, several others treated by different practitioners, in which its use was attended with the best effects.

In various other periodical complaints, Mr. Brande has frequently given the *Angustura* with advantage. He relates a remarkable case
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of periodical faintness and sinking, which was cured by a few draughts, consisting of eight grains of the Angustura in some mint water, taken twice a day. Many of Mr. Brande's friends have, he tells us, experienced similar good effects from it, in diseases of the intermittent kind, particularly in periodical headaches.

Mr. Brande has so often witnessed the good effects of the Angustura in irregular and low or nervous fevers, and found it so much less apt to disagree with the stomach, or to run off by the bowels, than the Peruvian bark, that he now always gives it the preference. In this complaint he generally uses the decoction, often alone, but sometimes combined with aromatics. Mr. Brande here relates the circumstances of a fever treated by Dr. Lettsome, attended with numerous petechiæ, vibices, and other symptoms of great putrefescency; in which, notwithstanding the use of Peruvian bark, with vitriolic acid, opiates, and wine, a profuse and bloody diarrhœa coming on, rendered every attempt to raise the sinking patient ineffectual. Yet after her pulse was scarcely perceptible, by the use of
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the Angustura decoction, to the extent of an ounce every three hours, and afterwards less frequently, the dysentery was gradually lessened, and on the fourth day ceased ; soon after which she got perfectly well. Mr. Brande relates also a singular case of a gangrenous affection of the throat, which not only affords a strong proof of the antiseptic power of the Angustura bark, but where this power, being obtained from a very small dose, contributed, in all probability, to save the life of the patient.

In ulcerated fore throats, and in that species of angina which is accompanied with a scarlet eruption, this bark, Mr. Brande observes, has proved eminently useful. It has in this disease been given with advantage internally, in the form of decoction. And the simple mixture, with the addition of a little mineral acid, has at the same time been employed by way of gargle.

Mr. Brande concludes this treatise on the Angustura bark, with some observations on its use as a general tonic. He contends, that when it is necessary to strengthen the system, the Angustura is upon the whole preferable
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to any other tonic hitherto known ; and many of his friends, he observes, who have employed it, concur with him in this opinion. On combining this bark with iron, and its preparations, he tells us, that no sensible change takes place ; though the astringent matter of most other corroborants forms a compound with iron, the effects of which differ considerably from those which either of the articles, taken separately, would have exerted.

In cases of chlorosis and menstrual obstructions, owing to too languid circulation, Mr. Brande has found the *Angustura* more generally useful than any other tonic. Here both the extract and decoction have been given, combined with chalybeates, with great advantage. But occasionally, during the use of this medicine, gentle aloetic laxatives, with a small proportion of calomel, will be necessary.

By some practitioners, particularly by Mr. Wilkinfon, the *Angustura* has been successfully employed in hooping-cough. From that gentleman's observations, communicated in a letter to Mr. Brande, it appears that when the chincough prevailed greatly, he gave it in many instances with great advantage.

tage. But he allows that it will answer only at a particular period of the disease. When he gave it in the beginning, without either premising emetics or laxatives, he soon found that it did not abate the violence of the cough, and that his patients were in other respects worse. He is now convinced that its good effects depend on its tonic powers, and that, as after a certain time the disease is probably kept up by the irritable state of the parts affected, this is the period when the Angustura will be found highly useful. In corroboration of these good effects from the Angustura, Mr. Brande subjoins the testimony of several other eminent practitioners, and particularly a letter from Dr. Pearson, physician to St. George's Hospital, who has employed it with success in many different diseases; and remarks, that in various disorders of the stomach he has found no vegetable bitter so serviceable as the Angustura.

It is by no means to be expected, that in all the diseases here mentioned, the Angustura bark will be found uniformly successful; but from the observations of Mr. Brande, confirmed by the testimony of many

other eminent practitioners, as well as from what we have ourselves seen in actual practice; there can, we think, be no doubt, that the Angustura may justly be considered as an important addition to the Materia Medica.

XIV.

Medical Reports of the Effects of Blood-letting, Sudorifics, and Blistering, in the Cure of Acute and Chronic Rheumatisms. By Thomas Fowler, M. D. of York, Member of the Royal Medical Society of Edinburgh, &c.
8vo. London.

TO the learned and indefatigable author of the work before us, the public are already indebted for many important observations in the practice of medicine, particularly for his medical reports of the effects of tobacco in the cure of dropfies, and of the effects of arsenic in the cure of agues. Following the same plan which he formerly adopted, and which indeed had been recommended by the justly celebrated Bacon, for the improvement of medicine, he here presents us with an accurate and candid account of the effects which he has observed to result from several different medicines in a very

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great

great number of rheumatic cases. These he appears to have noted down, with minute attention, for a considerable number of years, particularly for the period of near ten years, during which he had been one of the physicians to the General Infirmary at Stafford; and as it must on all hands be allowed, that an experimental knowledge of the virtues of efficacious medicines must be of the utmost consequence to the practitioner, we cannot too highly applaud the industrious zeal with which he has endeavoured to render hospital practice subservient to medical improvement.

In the work before us, he has arranged under particular sections the cases both of acute and of chronic rheumatism, in which blood-letting, tincture of guaiacum, Dover's powder, blistering plasters, warm bathing, or turpentine embrocations, were employed. And in order to ascertain the operative and curative effects of these active articles with greater accuracy and precision, he not only confined himself very much to one form of prescription, or composition of medicine, but likewise seldom administered two active medicines at the same time, or even so near together as to interfere

terfere with the operations of each other. Thus he was enabled to discern between the operations of art and the efforts of nature, to distinguish the real effects of one remedy from those of another, and finally to discriminate between the operative and curative effects of the same medicine.

For the account, however, which he has given of particular cases, as well as for the particular observations which he has offered on each remedy, we must entirely refer our readers to the work itself. And we must here content ourselves with giving a brief view of the general observations and conclusions which he has drawn from extensive practice.

Blood-letting is certainly a very useful remedy in the treatment of the acute rheumatism ; yet it appears from the facts related by Dr. Fowler to have been much more useful as an auxiliary, than a principal remedy. He therefore recommends that a cautious use of the lancet should be adopted ; for when the acute disease was established, and was likely, from its nature and type, not to be brought to a speedy crisis, the temporary and tran-

ficient mitigation of symptoms, which was generally obtained by diminishing the action of the system from repeated losses of blood, by no means compensated for the more lasting injury done to the constitution, and the greater hazard of a lingering crisis or a chronic rheumatism ensuing.

It appears from the facts in the treatment of chronic rheumatism, that the curative effects of blood-letting were still less obvious than in the acute, and therefore that its debilitating effects rendered its administration still more limited and exceptionable in this form of the disease.

Of all the remedies in rheumatism, of which Dr. Fowler has here recorded the effects, sudorifics seem to be by far the most efficacious in producing artificial cures. Their curative effects appear to be strongly connected with their operative ones; and they have likewise this recommendation, that they are not found to debilitate the patient so much, as either repeated blood-letting, or the frequent use of purgatives.

The tincture of guaiacum, a very powerful sudorific, Dr. Fowler concludes to be one of
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the most useful remedies which has ever been discovered for rheumatism. He infers from numerous facts, that it may be employed with advantage in every stage of the disease. The ammonia, or volatile alkali, which it contains, does not afford any solid objection to its being administered in a rheumatic fever, though it stimulates and heats the mouth; for it is found from experience seldom to stimulate the system, or increase the pulse, when given in moderate doses, or even in large ones, unless it fail to prove sudorific. In cases attended with costiveness, this tincture is, Dr. Fowler thinks, decidedly preferable to Dover's powder; for, besides operating as a sudorific, it in general moves the intestines in a very gentle manner, without griping. On the other hand, in all rheumatic cases attended with a lax or purging state of the intestines, Dover's powder claims prior attention as a sudorific; and in most cases of this kind, unless where it is found to disagree, either from idiosyncrasy, or from the state of the febrile symptoms, it is decidedly preferable to the tincture of guaiacum.

The sudorific operation of the warm bath

in the treatment of chronic rheumatism, Dr. Fowler found, had the effect of weakening the patient much more than the same operation, either from the tincture of guaiacum, or the Dover's powder. Warm bathing ought therefore, Dr. Fowler thinks, to be seldom prescribed to rheumatic patients, who are either very delicate or much debilitated.

Blistering plasters Dr. Fowler has found to be very powerful remedies for the removal of violent rheumatic pains in general. Some caution however is, he tells us, to be observed with respect to their application in the treatment of acute rheumatism. The pains should not only be considerable, but should not be remarkable for their transitions; because, if a vesicatory were always to follow the shifting pains, the relief obtained would by no means compensate for the trouble, pain, and soreness, occasioned by such operations when frequently repeated. On the other hand, in most chronic cases, where the pain is violent and deep seated, as in the lumbago and sciatica, we can scarcely, Dr. Fowler thinks, be said to do our patients justice, if we omit to recommend their application.

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When rest is much impaired from the violence of the pains in chronic rheumatism, a moderate dose, either of the tincture of opium, or of the camphorated tincture of opium, may in general, Dr. Fowler observes, be exhibited at bed-time, for obtaining sleep. These remedies will likewise, in more limited doses, be useful for the same purpose in the treatment of the acute rheumatism. But it must, he thinks, be acknowledged, that from the febrile symptoms attending the disease, they will sometimes disagree, and fail of procuring rest. They must therefore be repeated or not according to their effects.

In the intervals between the operations of sudorifics, in the treatment of the acute rheumatism, either nitrous medicines, or the common neutral mixture, prepared with the fixed vegetable alkali and lemon-juice, or distilled vinegar, may in general be administered three or four times a-day with advantage.

After the febrile symptoms are gone off, and the pains either vanquished or become very trifling, if the patient be much debilitated, it will, according to Dr. Fowler's observations, be proper to administer, two or three
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times a-day, a dose of some preparation of Steel, Peruvian bark, Gentian, or other tonic medicines, in order to strengthen the system.

The regimen, in the treatment of the acute rheumatism, must, Dr. Fowler affirms, be always antiphlogistic. The diet ought to be of the vegetable kind, such as farinaceous substances, the products of the kitchen-garden, ripe fruits, milk, tea, &c. These, he thinks, are the most proper articles for the support of the patient. He should also, Dr. Fowler tells us, abstain from fermented liquors altogether, except occasionally a little wine in whey, gruel, or the like. Rest of body, composure of mind, an airy room to sleep and sit in, with moderate covering, both of apparel and bed-clothes, are likewise objects deserving attention.

As soon as the febrile symptoms and the pains are materially diminished, when debility constitutes the chief part of the patient's complaints, and when his appetite returns, he may begin to mend his diet, by gradually resuming the use of animal food, with a little
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ale or wine at his dinner, in order to accelerate the recovery of his strength.

With respect to regimen, in the treatment of chronic rheumatism, Dr. Fowler thinks it sufficient to recommend, that the patient should observe temperance in his diet and general mode of living.

The anomalous cases of chronic rheumatism, complicated with other diseases, originating from sprains and bruises, which Dr. Fowler had occasion to treat, were, for the most part, materially relieved, by the general anti-rheumatic treatment already mentioned. But the cases which depended on a venereal taint, were either not at all relieved by the same treatment, or relieved only in the most transient manner. All of them, however, excepting one, were cured by charging the system with a regular course of mercury, for several weeks together, in the same manner as is usually done in more evident cases of a confirmed venereal lues.

Upon the whole, Dr. Fowler observes, that, from a due consideration of the facts which have been delivered, the following conclusions may be deduced.

1st. That there are few cases of acute rheumatism which will not admit of an artificial cure, especially by the sudorific plan of treatment.

2^d. That there are likewise scarce any cases of chronic rheumatism, which will not admit of some material relief, and that near one half of a given number will admit of an artificial cure, especially by the sudorific plan of treatment.

3^d. That if the acute rheumatism be in the second or third week of the disease, an artificial cure will be more frequently obtained during the first week of treatment, than when it comes under the care of a practitioner at any other period.

4th. That if the acute rheumatism be in the first week, an artificial cure will often be obtained during the first week's treatment; but it will more frequently resist the curative influence of medicines until the second week's treatment, and sometimes even longer.

5th. That the moderate use of the lancet, especially as a preliminary to the administration of sudorifics, is a valuable auxiliary in the treatment of acute rheumatism.

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6th. That the tincture of guaiacum is almost always sudorific, and frequently laxative; and is extremely efficacious in the treatment both of the acute and chronic rheumatism, especially the former.

7th. That Dover's powder operates, for the most part, as a powerful sudorific, and also as an anodyne and astringent; and is a very efficacious remedy in the treatment both of acute and chronic rheumatism.

8th. That the warm bath is most powerfully sudorific, and a very efficacious remedy, in the treatment of chronic rheumatism, but is more debilitating in its operation, than either the tincture of guaiacum or Dover's powder.

9th. That the application of leeches is extremely useful, as a local remedy, for the mitigation of the more urgent pains of particular parts in the treatment of acute rheumatism.

10th. That the application of blistering plaisters, which is generally productive of a vesication, a smarting foreness, and a copious discharge, is one of the most efficacious local remedies which experience has yet discovered,

ed, for the relief or removal of fixed reumatic pains, especially those of the sciatica and lumbago.

11th. That the turpentine embrocation, which consisted of one part of the oleum terebinthinæ rectificatum, added to three parts of the spiritus vinosus tenuior, is an useful palliative in the treatment of chronic rheumatism, for the purpose of relieving troublesome pains.

SECT.

S E C T. II.

MEDICAL OBSERVATIONS.

I.

History of a case of Cystirrhæa, cured by the use of Astringent Injections thrown into the Bladder. By Mr. Thomas Brown, Surgeon, Musselburgh.

ON the 22d of April 1794, I was requested to visit a Mrs. C—, aged 30, of a slender delicate habit. Her situation in life afforded her an opportunity of living generously. She had been the mother of two children.

She was confined to bed; complained of

a most excruciating pain in discharging her urine ; had a desire to repeat it every two or three minutes, with a constant and severe sense of burning heat about the urethra, which sometimes extended over the vagina.

When in this situation, the urine flowed with great difficulty, generally in drops, and rarely in a stream. The quantity discharged in 24 hours was less than in a state of health, and frequently of a particular appearance ; for, upon being attacked in the manner described, it was very soon followed with the discharge of a matter of the consistence of jelly, fibrous and ropy, and quite transparent. After exposure to the air for an hour, it generally became fluid, and felt like oil between the fingers. Upon the evacuation of this matter, which sometimes exceeded a table spoonful, the symptoms generally abated, and the patient had an interval of three or four days. Sometimes, however, it was much shorter, and frequently very incomplete.

The continuation of these symptoms, for a considerable time, had now produced others, which were highly alarming and unfavourable. She was reduced to the greatest weakness, seldom

seldom able to leave the bed ; her stomach rejecting all food, from excessive and very constant vomiting. She was subject to profuse sweats, with frequent hot and cold fits ; her pulse generally 120, and sometimes 140, feeble and small ; belly rather costive, and her features put on the appearance of one in the last stage of pthisis pulmonalis.

The commencement of this complaint was in March 1793, about a month after delivery, which was tedious and severe. For the three last months of her pregnancy, she was much distressed in retaining her urine, very feeble, and mostly confined to a chair. The symptoms, from their first appearance, gradually increased ; and at last, the greatness of her distress overcame her delicacy, and compelled her to apply for relief.

Upon considering the whole symptoms, I was inclined directly to conclude it a distinctly marked case of cystirrhœa. Before, however, beginning the treatment, I wished to have satisfied myself with regard to the existence of a calculus. This satisfaction I could not obtain ; and was under the necessity of proceeding upon my first conclusion.

From the length of time which the treatment continued, it would be tedious to give an exact journal. I shall only observe here, that after persisting from the 22d April to the 1st October 1794, in a variety of means, a cure was at last effected; and at present she enjoys the same state of health she did before the attack.

When I began the treatment, my views were confined entirely to the employment of medicines given by the mouth, or means acting on the system in general. Most of the medicines which I had recourse to, are not entitled to any notice from their effects. Opium was used every day, both by the mouth and clysters, without even much temporary relief. Peruvian bark, in powder and extract, cicuta, uva ursi, steel, zinc, diluents, cold bath, &c. were tried, all in succession or conjoined, but to no purpose. From the exhibition of the uva ursi, to which I gave a fair trial for five weeks, she at first found considerable benefit; and, during its use, the patient had an interval of ease for 14 days. After persevering, from the 22d of April to the 20th of June, in a constant and unbeneficial

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ficial use of medicines, with every attention to regimen, I found my patient nothing relieved, and now in the highest pitch of agony and despair. Her cries were dreadful, and could be distinctly heard out of doors. The pain now extended along the back and belly, so as to produce spasms of the muscles, with little remission; and she was constantly confined to bed.

I was now at a stand, and for a few days gave her up entirely to the influence of opiates.

Upon again attentively considering the situation of my patient, I was still of opinion that the whole symptoms were capable of being traced to the affection of the bladder and urethra; and that nothing existed but what would in all probability yield, if the idiopathic cystirrhœa could be subdued. I resolved therefore, as the last resource, to make trial of injections; and on the 20th June I began their employment, by throwing into the bladder four ounces of thin mucilage of gum arabic, with a drachm of tinct. theb. In a few days an addition of two ounces of an infusion of bark in simple water was made to

the above, and in some days more it was changed for the same quantity of the infusion in lime-water ; and from July 1st to the 19th, it was again changed for an infusion of bark and alum to the same bulk. In the whole of these injections the tinct. opii was never omitted. From this period to the 9th September, I made use of a mixture of linseed-oil and lime-water, with a drachm of a watery solution of opium. These were next succeeded by a solution of zinc. vitriolat. to the extent of 35 grains in four ounces of water, thickened with gum tragac. and two drachms of the watery solution of opium ; and continued to the 1st October, when a cure seemed effected.

I shall now take notice of some particulars which deserved attention, during the employment of the injections.

The instrument I employed for throwing them up was a common female catheter, mounted with a bladder, which I am convinced answered better than any other contrivance. I seldom found any difficulty in exhibiting them, except when the attack was severe, when the urethra was sensibly swelled, protuberant,

tuberant, and somewhat displaced, and then the increase of heat was very perceptible through the whole vagina. The operation was always under the clothes, and without light. The extent of the injections to the 19th of July, was four ounces; and from that period to the 1st of October, they never exceeded two.

During the employment of the four first kinds, no permanent benefit was obtained; and indeed those of the alum and bark were evidently pernicious, the irritability of the bladder and the frequency of the paroxysms being much increased. The next in succession, formed of lime-water and linseed-oil, were only employed for a few days before they produced the happiest effects; and in about twelve days such a complete remission of symptoms was obtained, as inclined the patient to desist from their use. This, however, continued only for three weeks, when I again began their use, and in a short time they removed the symptoms. Imagining, however, that probably the sensibility of the diseased parts was only removed by them, I had recourse to the last species, with the view of giving tone, and

had the pleasure of finding them answer fully the indication, by effecting a cure.

In the use of this great variety of injections, it was very obvious, that those which possessed much tenacity always afforded most relief; and I was fully satisfied, that it was from this circumstance that the fifth species of injections had their principal effect; for they afforded a very ample defence from the influence of the urine, and the conjunction of the watery solution of opium gave a full opportunity of diminishing the sensibility of the urethra. The change in the form of the opiate, I was inclined to think very material. All the kinds of injections had the influence to make the patient retain her urine for a considerable time, which seemed entirely owing to the opiate; for even during the use of the alum and bark this effect was produced, although shorter in its duration.

Upon the whole, after attentively considering the symptoms, together with the treatment and its effects, I am inclined to draw the following conclusions.

1st. That in this case not only an increased sensibility, but an abrasion and loss of substance

stance existed in the inner coats of the bladder and urethra.

2d. That, from the nature and advanced state of the disease, no benefit could ever have been derived from the use of internal means, or remedies operating on the system in general.

3d. That the cure was entirely to be attributed to the injections, and chiefly to the two last kinds.

4th. That injections of great variety may be thrown into the bladder with great safety and advantage.

And, *lastly*, That this case affords a strong presumption that they may be thrown into cavities, either natural or artificial, (where no internal remedies can possibly be of any use), with good effects, and that it goes far to make their use much more general than hitherto.

II.

A Letter from Mr. William Macbeth, Surgeon in Demerary, to Dr. Duncan, giving an Account of a Singular Affection of the Urinary Organs, common among the Negroes in Demerary.

I TAKE the liberty of sending you an account of a troublesome disease, which appears peculiarly to effect the negroes who inhabit the sea-coast of this colony. As I do not recollect to have observed it taken notice of by any author who has treated on diseases of tropical climates, and as it appears to me a singular disease which occurs frequently in this colony, I thought it might be worthy of a place in the Edinburgh Medical Commentaries.

Previous to a history of the disease, it may be thought necessary to give a few preliminary observations with respect to the nature and situation of the windward or east sea-coast
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of Demerary, a country almost unknown in Europe, where, from every information, this disease prevails most. And to give some account of the state of the weather and mode of life of the negroes in this country, which is somewhat different from that of those in the British colonies.

The division of the colony where these observations were made has only been cleared of wood within these few years past, and before cultivation was overflowed during the rainy seasons, and in the dry seasons was occasionally covered with salt water at every spring-tide.

In cultivating the settlements, the land is drained by means of trenches and flood-gates, which serve to evacuate the waters in the rainy seasons, and whatever may accidentally ooze through the dams next the sea during the tide of flood, or from the uncultivated lands in the very rainy seasons.

The soil of this part of the colony consists generally of a light spongy vegetable mould, a small proportion of sand and clay as the basis, which becomes friable, and readily pulverizes, after being exposed for some time to the action of the sun and air.

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The year is divided into two dry, and two rainy seasons. The first dry season commences in January, and continues until May; the first or great rainy season, from May to August; the second dry season, from August to October; and the little rainy season, from this month to January.

During the rainy seasons, there is an immense body of water behind the cultivated part of the country; however, a considerable degree of circulation is perceived, as it communicates on the west side with the river Demerary, and on the east with several smaller rivers, besides a number of canals. There is therefore little or no stagnant water, either in the cultivated or uncultivated part of the east sea-coast, and on that account we seldom meet with diseases produced by marsh effluvia.

Although the weather appears to have no influence on the disease hereafter to be mentioned, yet I apprehend a few observations with respect to it may not be unacceptable. The variation in the temperature of this coast during the last twelve months has not been great, and is cooler than might be expected from

from the latitude [$6^{\circ} 48'$ N.] and the low situation of the country. In the course of that period, Fahrenheit's thermometer never rose above 88° at noon in the shade, nor was it ever lower than 74° at night. The thermometer was suspended in a large well-aired chamber, and placed in a situation where the sun could not have immediate influence on it. The mean annual temperature may be about 81° .

The prevailing wind on this coast is the E. N. E. or trade-wind, which blows during the months of October, November, and December. From January to May it becomes more northerly, and from that month to September it returns to the E. N. E. except for a few days at the commencement of the rains, when it sometimes blows from the S. or S. W. It is then sultry and disagreeable in the day-time, but during the night and morning uncommonly cool, and occasions an unpleasant chilly sensation. This is the only land-breeze we have; and it is only during its continuance that we have foggy weather or heavy dews in this part of the country.

The comparative degree of coolness which
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the inhabitants of this coast uniformly enjoy, may, I presume, be easily accounted for, when we reflect, that the E. N. E. wind must pass over a great part of the Atlantic Ocean, which cools and preserves it to the temperature mentioned, until it arrives on the coast of Guiana. This may account for the north wind being the coolest, and the E. N. E. the most pleasant. - It is probable also, that the great evaporation may contribute towards cooling the air.

The employment of the negroes, and their manner of living here, is similar to that of those in the British colonies, except that here it is not nearly so laborious, from the nature of the country ; and their food, which is chiefly plantains, is in greater abundance, and seems to agree better with them than any other species of food.

Their common beverage is what is here called bush-water, which is highly impregnated and deeply tinged with vegetable substances ; however, the taste is not unpleasant, although it frequently causes diarrhoea with strangers, on their first arrival.

The dress of negro men, if it may be so called,

called, is only a hat, and a piece of cloth applied in the manner of a T bandage, and for women a hat and petticoat. These partial coverings seem more consonant to the nature of their constitutions than warmer clothing; and in this dress they do not appear to be so much affected by the vicissitude of the weather.

It may not be improper to add, that the disease known by the name of the *mal d'estomache*, which is so frequent and so often fatal in the Windward Islands, is unknown here; and even negroes labouring under this disease, are cured after they have been some time in the colony, without the aid of medicine.

At the commencement of the disease which I am now to describe, the patient generally complained of a sense of uneasiness and pain in the region of the urinary bladder, which shoot along the urethra towards the glans penis, a frequent desire to make water, attended with tenesmus, and a considerable degree of pain in the small of the back. The urine was emitted with difficulty and pain, and sometimes by drops only. At the first appearance

appearance of the disease, the urine in general was of the natural colour ; but as it advanced, it became turbid and ropy ; and after the urine was discharged, it was sometimes followed by a few drops of mucus or blood, which excited a considerable degree of pain. In some cases, urine mixed with blood was the first symptom of the disease ; in others, a considerable quantity of mucus, of an ash colour, was discharged with the urine ; and in many cases, small grumous particles of blood were found at the bottom of the vessel, after it stood for some time. In a great number of cases, we have observed a discharge of mucus from the urethra, resembling the matter of gonorrhœa ; which appearance induced some practitioners to mistake the complaint for that disease. When improperly treated by astringent injections, I have observed the disease to be rendered tedious, obstinate, and more painful. Costiveness seemed always to aggravate the complaint. The pulse was generally regular, and the skin of the natural heat. Upon the most attentive examination, we never could perceive the smallest particle of sand deposited in the urine of those affected with

with the disease. With the dried residuum of the urine of several subjects and at different periods of the disease, we have tried the sulphuric, muriatic, and citric acid, but they produced no effervescence.

When I first observed the disease, soon after my arrival in this colony, I considered the complaint as merely of an inflammatory nature. Venæsection, mucilaginous decoctions, nitre, and gentle purgatives, were prescribed, without much relief. I afterwards gave diaphoretics, opium, and camphor, with as little advantage. Recollecting to have seen the balsam copiaba afford considerable relief in a complaint similar to this, I gave a drachm of it mixed with two of mucilage of gum Arabic, thirty drops of sweet spirit of nitre, and a little syrup, morning and evening. This medicine succeeded beyond my expectations, and never failed to cure the complaint, or to relieve the patient in a few weeks, particularly when application was made at the commencement of the disease. But if the complaint was mistaken, a much longer time elapsed before a cure was effected. It also frequently yielded to the balsam copiaba alone.

During

During last year, we had from 150 to 200 patients labouring under this disease, and only one case had an unfavourable termination. A robust negro man, the property of Joseph Hamer, Esq. was attacked with the disease in November 1792, a few months after his arrival. In the beginning of February 1793, I first saw him ; at which period he was considerably reduced, complained greatly of the pain in the region of the bladder, which was increased by the slightest touch. There was also an evident hardness and swelling of that organ. He had frequent and urgent calls to make water, which was discharged only by drops, and with very great pain. It was frequently mixed with blood, at other times it had the ash-coloured appearance already mentioned. He also complained of his mouth, which was affected by the use of mercury, for the second time since the commencement of his disorder, which was mistaken for lues venerea.

I directed that no more mercury should be given, to stop making use of injections, and to give him a gentle purge. When the ptyalism ceased, the balsamic drops were directed to
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be given; and he was ordered to drink a quart of the decoction of the hog plumb-tree bark daily. He continued the use of these medicines for six or eight weeks, which at first gave him some ease, but at length had not even that effect, and he became weaker every day. We now changed his medicine to the balsam copiaba alone, assisted by emollient fomentations to the region of the bladder, and emollient clysters. This also afforded a temporary relief. I tried a preparation of the sanguis draconis and alum, recommended by Dr. Crawford, surgeon to the garrison of this place, but without any advantage. Diaphoretics, camphor, and opium afforded him a temporary ease. In the month of August following, he begged to be put into the hands of a black nurse, which was complied with, at the request of his master. Under her care he remained three months; and from what I could learn, she administered the decoction of a few simples, of which she made a mystery. However, during that period, he became worse, and was reduced almost to a skeleton. In the month of December, I was again requested to visit him. He then had hectic fever, was so weak that he could not move

without assistance, sometimes discharged blood, at other times the ash-coloured mucus, and urine mixed with purulent matter, or what appeared to be such. The blood discharged now was pure, and in larger quantities than at any other period of the disease. The hardness and swelling of the bladder were considerably increased.

With a view to afford some relief, but without any hope of his recovery, I directed a powder, composed of camphor, opium, and nitre, to be given three times in the day, assisted with mucilaginous decoctions, and emollient clysters and fomentations. On the evening of the 19th of January 1794, death relieved him from misery, and the following morning I opened the body.

During the illness of this man, there were six others on the same plantation, who were subjected to the disease; and a cure was effected by the balsam copiaba alone. One of them had a relapse, although not violent, and it readily yielded to the balsam.

On dissection, the urinary bladder had the appearance of a large unequal scirrhus tumour, considerably larger than the natural

size when distended with urine, and strongly adhering to the peritoneum at the fundus. The coats of the bladder were prodigiously thickened : upon cutting into it, we found it, in several places, nearly an inch thick, and there escaped a considerable quantity of a foetid sanies. The interior surface had a honey-comb appearance, with many inequalities. By the enlargement of the coats of the bladder, and pressure on the orifices of the ureters, their cavities were so enlarged as to admit of an ordinary sized finger. That part of the rectum contiguous to the bladder was somewhat diseased, and the coats of that intestine enlarged. The kidneys were rather larger than natural, and flaccid. The rest of the intestines were to all appearance perfectly sound.

Among the number of cases which came under our care, we had only two white people attacked with the complaint, which happened at a time when rain-water was scarce. The first was seized with the disorder in March last. By the use of the balsam copiaba, his complaint was removed in a few days. This man informed me he was troubled with cal-

culus, some time before he left Scotland, and the symptoms of the present disease were similar to what he formerly complained of. However, during the disease, no particles of sand could be perceived deposited in his urine. The other is the case of a gentleman, at present ill of the complaint, under our care. When first attacked with the disease, he made use of astringent injections, mistaking the complaint for gonorrhœa. This practice, as I have already observed, tends to aggravate the disease, and render it more obstinate. This gentleman's father and eldest brother were both troubled with calculus of the bladder.

I shall now beg leave to mention a few facts, which may throw some light on the cause and frequency of this disease among negroes, and why the whites should in general be exempted from it.

A short time after my arrival in this colony, observing the frequent occurrence of the complaint among negroes of both sexes, and at every period of life, and also observing that white people were in general exempted from the disease, it occurred to me, after some reflection, that this distinction arose

rose from the former being under the necessity of using the *bush-water*, and the latter seldom, if ever, making use of any. And even in times of scarcity, when they are compelled to use it for any purpose, it is always filtered. For common beveridge, it is in general mixed with Madeira, claret, or some spirit, which probably may correct the tendency that this water may have to produce the disease. This idea is corroborated by observing that domestics, who live in a manner almost similar to the whites, are also free from the disorder ; by observing that in the course of fifteen months, we had only one case of the disease on the plantation Paradise, where the negroes had abundance of cistern-water ; and by remarking, that we had upon an average about four to one attacked with this disorder during the dry season, to what we had during the rainy months. My partner, Mr. Bartrum, who had practised many years a considerable distance up the river Demerary, where the water is pure and transparent, does not recollect to have ever seen a single case of this disorder.

Upon the whole, I conceive that the water

which the negroes here are, from necessity, obliged to make use of for the different purposes of life, is the primary cause of the disease.

1st. From the white inhabitants, and their domestics, being exempted from the disease, who seldom drink this water.

2^d. From the disease being less frequent during the wet months, when there is an abundance of fresh water.

And, 3^d. From the disease being seldom seen on estates where there is a sufficiency of cistern-water, and never upon the banks of the rivers or creeks, where the water is free from impurities.

Whether the Aborigines or Indians are troubled with the complaint or not, I cannot say. I apprehend they are not, as they live in the interior parts of the country, where they have the benefit of wholesome water. However, balsam copiaba is a favourite vulnerary with them.

III.

History of a Case of Inverted Uterus terminating successfully. By Mr. John White, Surgeon, Paisley.

ON the 26th of June 1793, about ten o'clock at night, I was desired to visit a married woman, twenty-seven years of age, who was delivered of a fine healthy child, about five o'clock that same evening. The delivery took place while she lay on a couch. There was nothing unusual in the progress of the labour, nor was the birth of the child remarkably sudden; but the midwife having found difficulty in extracting the placenta, had employed much time and force in pulling at the navel-string, and had caused the woman to cough, sneeze, and even to vomit, by tickling her throat with a finger, before she was able to accomplish her purpose.

The delivery of the placenta was immedi-

ately followed with an hæmorrhage from the uterus, and violent forcing down pains, similar to those which accompany labour. But as in all her former labours, (four in number), a flooding to a certain degree had likewise occurred, this circumstance, on the present occasion, gave no great alarm; and as the pains, she was assured, were no ways uncommon, she endeavoured to endure them with patience and fortitude.

She had been nearly five hours in great agony when I saw her. Her countenance was pale and ghastly; her extremities were cold; her pulse at the wrist was scarcely perceptible, quick and irregular; and her voice was so feeble, that it could scarcely be heard. She had great pain in her thighs, and the lower part of her belly; but the pain in her back and loins was, she said, quite unsupportable. The hæmorrhage from the uterus had, however, been pretty moderate for some time; but the bearing-down pains continued so violent, that, to use her own expression, she thought her whole bowels would be forced out.

On applying a hand to the abdomen, I

was certain she had not another child to bear; and from the account I had just received, and nature of the present symptoms, I immediately suspected there was an inversion of the uterus.

Without delay, I therefore examined her *per vaginam*, and found the whole cavity of this organ filled with a large, round, and pretty firm fleshy tumour, rugous on the surface, and having the shape of a printer's ball, or the bottom of a large bottle of the elastic resin. This I considered as evidence sufficient.

I would instantly have attempted the reduction of the uterus, but the poor woman was so very faint and weak, and all the parts concerned so tender and irritable, that I thought it could not be undertaken for some time, but with considerable risk. I therefore gave her forty drops of laudanum, and the same number of elixir of vitriol, in a glass or two of wine, to recruit her strength a little, and to moderate the violence of the pain and irritability.

The midwife having left her as soon as she thought she had done her duty, she was again
immediately

immediately brought ; and having, at my desire, made the necessary examination, was very soon convinced of what had happened.

After waiting about twenty minutes, to allow what she had got to take effect, I gently insinuated my hand through the os externum ; and grasping the tumour firmly for some time, to diminish its bulk, I began then to push at the middle of the fundus, and, as nearly as I could, in the direction of its mouth ; employing sometimes a single finger, sometimes two or more, or the whole fingers and thumb collected into a cone-like shape, as I found upon trial could best suit my purpose. I likewise tried, from time to time, to dilate the os internum, by insinuating a finger between it and the body of the uterus ; but from the contracted state in which it was, and the great bulk of the tumour, it could not be done but with considerable difficulty.

By a due perseverance, however, in one or other of these methods, I at length had the good fortune to reduce it completely ; and as I gradually withdrew my hand from the cavity of the uterus, into which it had at last
fairly

fairly passed, I gently irritated the os internum with a finger, to excite its contraction. And having enjoined rest and a recumbent posture, and ordered some light nourishment, I took my leave.

My patient continued in a weak and languid state for many weeks. Her legs were œdematous for a long time after she could go about; and the quantity of milk in her breasts was so small, that another woman was required to suckle her child; but by the use of suitable cordials, tonic medicines, nourishing diet, and moderate exercise, in the course of a few months, I had the satisfaction to see her recover completely.

REMARKS.

The inversion of the uterus is one of the most formidable and alarming accidents which can happen in delivery; for if not soon known, and speedily reduced, it is apt to prove fatal in a short time. It ought, therefore, to be well understood, and particularly guarded against, by every person practising midwifery.

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That the inversion, in the present case, was occasioned by the very forcible and injudicious means employed to extract the placenta, there can, I think, be little doubt; particularly when it is considered, that the extraction was made while the woman stood upright; and of the numerous instances of the like kind on record, by far the greater part of them appear to have been the result of a similar rash and inconsiderate practice.

As in making the reduction in the above case, I experienced much inconvenience from the shortness and smallness of my fingers, I would beg leave to propose the trial of the following simple instrument, if the like difficulty should ever happen to any other practitioner. It consists of a bit of light wood, about fourteen inches long, not quite cylindrical, but slightly tapering from the ends to the middle, and the ends rounded, like the head of a walking cane. The diameter of the one extremity is an inch, and the other an inch and three quarters; the one or the other to be employed as the particular circumstances of the case may seem best to suit.

suit. The whole of it is covered with smooth and soft leather, and the ends are thickly stuffed with wool or soft hair; so that they can hardly do any injury to the uterus, unless employed in the most inattentive and improper manner.

IV.

IV.

History of a remarkable Case of Retroverted Uterus terminating successfully, after various fruitless Attempts for Reduction. By Mr. John White, Surgeon, Paisley.

THE subject of the following case was a poor woman, twenty-six years of age, the mother of three children. After having suckled the last child for eighteen months, her menses appeared in small quantity on the 16th of November 1787. She continued to give suck for nine or ten weeks longer, during which time her menses did not return. This and some other circumstances led her to think she was again pregnant.

On the 21st of January 1788, when carrying a pailful of milk on her left haunch, she felt something, as she expresses it, in that side give way, and fall down towards the bottom of her belly. This was immediately followed with a violent pain of her back, and a sense
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of weight, or bearing down, in the lower part of the abdomen. A few days after this, her complaints were so much relieved, that she found herself able to be present at a dance with some of her neighbours, and was so imprudent as to take a very active part in that exercise. Her complaints next day returned with greater violence than before : She had a slight discharge of blood from the vagina, and now dreaded an abortion.

By the advice of an able practitioner in town, who suspected the case to be gravelish, she was blooded, and went into a warm bath, but without any alleviation of her pains ; on the contrary, they continued to increase daily.

I visited her on February the 15th, and found her in great agony. She had slept very little, if any, since the return of her complaints. She was feverish, and had a violent bearing down, both at the vagina and rectum, but from the former of these there was no discharge. The pains were very similar to those which accompany labour, but with scarcely any intermissions. She had great difficulty and pain in making water, and it was made frequently,

frequently, and in small quantities. She was likewise very costive, not having had a stool for the last eight days. A slight tension and swelling were observable over the abdomen, particularly in the hypogastric and left iliac regions; and she complained of slight pain when these were pressed upon.

On examining her, per vaginam, I was surprised to find the os tinea turned up, and nearly in contact with the symphysis pubis, and a large resisting tumour in the hollow of the sacrum, lying behind the vagina. Introducing a finger into the rectum, I felt the tumour very distinctly pressing upon the forepart of that viscus, but could not pass my finger beyond it. I immediately concluded it to be a case of retroverted uterus; and, after drawing off her water, and giving a laxative clyster, I put the means usually recommended for reduction into practice, but without effect.

Next day I renewed these attempts, but they were equally unsuccessful. She fainted away during the operation, and had a slight convulsion fit. This obliged me to desist.

For more than a week after this, she was
so

so extremely ill, that I durst not attempt any thing; nor indeed was there any probability of her surviving the reduction, even had it been possible to have accomplished it. Some slight alleviation of her pains was occasionally obtained by anodynes; but her stomach was now become so very weak and irritable, that almost every thing she took was rejected by vomiting.

She had had no stools since the first injection. I endeavoured repeatedly to procure stools in this way; but the passage was so completely blocked up by the tumour, that not one of the injections could be made to pass.

A partial suppression of urine having occurred from the beginning, I was frequently obliged to draw it off by means of the catheter. The tumour continuing to increase, and the os tincæ to be raised higher and higher, I found it impossible to introduce the catheter in common use into the bladder; I was able, however, to introduce the flexible one at all times with some difficulty.

The novelty of the case, and the dangerous situation in which my patient was, induced me to take the advice of some of my medical

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acquaintance. Dr. Farquharson was accordingly first called in; and, after examining the patient with great care, his opinion of the case was the same as my own.

By this time (February 24th), our patient being somewhat better, and having recovered a little strength, it was judged proper to make a third attempt; which was accordingly made, but all to no purpose. The tumour was so firmly wedged in the pelvis, as not to yield in the least degree upon pressure, and so very bulky as to fill up the cavities of the vagina and rectum. Her *fæces* were voided with great pain, and in small quantities, and seldom oftener than once in the eight days, although every mean we could think of to obtain stools was frequently employed.

On the 1st of March, she was admitted a patient at the Public Dispensary, and I continued to visit her, along with Mr. Thynne, then acting surgeon for that charity.

On the 3d of the same month, in presence of Dr. Farquharson, Dr. Jeffray, and some other professional gentlemen, Mr. Thynne and I made another attempt to reduce the
uterus,

uterus, but with the same bad success as before.

I ought not to omit mentioning, that some time previous to this last attempt, the gentleman who first visited her had, unknown to us, attempted the reduction by himself, and had employed some very powerful means for that purpose; but his endeavours were attended with no better success than our own.

As every practitioner who saw her agreed in thinking it a well-marked case of retroverted uterus, I believe we should have even made farther attempts to reduce it, had the woman permitted us; but she begged we would let her alone, adding, she would much rather die than submit to the pain of any more trials.

At our request, Mr. Hamilton, the late worthy professor of anatomy and midwifery in the university of Glasgow, was so obliging as to make her a visit. This was on the 16th of March. On examination, he found the os tinæ raised above the symphysis pubis, and pointing upwards and forwards, so that he could only touch the lower lip of it with the point of his finger.

From the low state in which he found her, and the tumour being so very fixed, he did not think it would be advisable to make any farther attempts to reduce it. He proposed, however, the introduction of a probe into the *os uteri*, to break the membranes, and to bring on an abortion. This he considered as the only means left for procuring the reduction of the uterus, and preserving the woman's life.

A common probe, bent in such a way as might best favour its introduction, was passed several times within the *os uteri*, to the length of three or four inches, but without occasioning any perceptible discharge. In its course, it met with several slight interruptions, and felt as if passing over a rugous surface. I tried frequently to make it point to the bottom of the tumour ; but found it impracticable, as it constantly took its direction obliquely upwards and backwards.

Being unable to bring about the desired abortion, or otherwise diminish the bulk of the uterus, we now gave up all thoughts of her recovery, and expected every day would have been her last. Her pulse was become very quick

quick and feeble. She often fainted on being raised; she was frequently distressed with retchings and hiccough, and convulsive twitches agitated the different muscles. She continued in this dangerous state for nearly two weeks, during which time cordials and anodynes were occasionally administered.

On the 7th of April, she had a very copious evacuation by stool. Her *fæces* were mixed with some puriform matter, and a great quantity of black grumous blood. After the second or third evacuation, her pains abated considerably; but some degree of tenesmus and diarrhoea continued for fourteen days, at which time her stools began to assume their natural consistence and colour.

From the commencement of the discharge of this matter, she began to recover daily. The tension and swelling of the abdomen went off by degrees. The tumour was found softer and less bulky on every examination, and the *os tincæ* gradually returned to its proper place.

By the middle of May, she had scarcely any complaint, and had so far recovered her strength, as to be able to do the drudgery of

her family. On the 30th of the same month, her menses returned ; an event I had often wished for. They flowed again on the 28th of June ; and I found her on the 10th July nearly as stout and healthy as ever.

I have lately had an opportunity of talking with the woman who is the subject of the foregoing case. She informs me, that she still continues to menstruate regularly, but rather sparingly ; and that she has no complaint, unless it be a slight pain which she generally feels when she voids her stools, pretty high in the rectum. And she has remarked, that the figure of her stools is now somewhat smaller than formerly.

The most probable opinion which I think we can form of the more remarkable circumstances attending this case, is, that an enlarged ovarium was the chief, if not the only cause, of the retroversion of the uterus ; that here no uterine foetation had actually taken place ; but, on the contrary, that ovarium impregnation or inflammation had occasioned the increased bulk of the uterus, as an effect of that well-known sympathy which subsists between these two organs.

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But whatever may be in this, the present case affords an opportunity for curious speculation and interesting remark. It likewise presents an instance, among many others, of the astonishing methods which nature occasionally employs to free herself from disease, and that after the ordinary resources of art have been fruitless and unavailing

V.

*History of a Case of Rabies Canina. By Mr.
Alexander Johnston, Surgeon, Dunbar.*

THOMAS HOGG, aged 33, superintendent of the farm of Helenstead, in the parish of Cockburnspath, early in the morning of Friday the 13th December 1793, having gone out to call up one of the servants in the next house, on his return heard the motion of something behind him, and felt himself seized in a furious manner by a dog, which laid hold of his right leg. He instantly endeavoured to disengage the animal, and with this view, laid hold of the upper and under jaw with the right and left hand ; and in the scuffle the right hand was bitten likewise.

Upon calling out to his fellow-servants, one soon came to his aid, who wished him to let the dog go; which he most positively refused to do ; observing, that, if the animal was mad,
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he was as ill as he could be ; but that, if he let it go, it might do more mischief. And he insisted on retaining his hold till the dog was killed ; which was done.

The Rev. Mr. Spence of Cockburnspath, having studied and practised physic, was immediately acquainted ; and, upon visiting, found him determined to submit to every thing thought necessary for his safety, as if the dog had been actually mad.

Mr. Spence stating the accident, I took every thing necessary with me, and got out about nine o'clock, the distance eight miles.

The patient again declared his conviction, that the animal was mad, from the mode of attacking him when walking quietly along, and offering no injury. And he was fully determined that all the wounded parts should be removed, that his safety might be insured.

Upon inspecting the wounds, I found two on the right leg, a little below the middle of the gastrocnemii muscle. He had his stocking on when bitten. These wounds externally appeared trivial ; the upper one, like a scratch, in some parts very little deeper than
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the skin, about half an inch in length; the lower one apparently would not admit the head of a common-sized pin; but, upon introducing the probe, it was found to extend on the outer part of the leg about an inch.

An incision was made, about three quarters of an inch from the outer extent of the upper wound, in an elliptical course inwards, and gently flanting downwards, to three quarters of an inch beyond the extent of the wound inwards. The same mode being followed above, and each incision being a quarter of an inch from the wound above and below, effectually included the injured skin; and the cellular substance being removed with the skin, the surface of the muscle was exposed to view.

The lower wound was dotted with ink on the skin, agreeable to the extent and direction of the probe; and an incision made, half an inch from the outward extremity of the dots, in a direct line over the wound, to half an inch from the wound, and the edges of the wound, made by the tusks, removed. We then proceeded to excavate the cellular substance, about an inch above and below
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the edge of the incision, removing part of the muscle likewise.

Intending to heal these wounds by the first intention, the edges were brought together by ligature, and dressed with lint, over which was a large pledget of mercurial ointment ; and the action of the muscle prevented by the application of a bandage.

The wounds in the right hand were as follow : One on the palm of the hand, extending outwardly, near half an inch in length, very little below the skin. This was removed by making an incision, about an inch in length, on each side of the wound, completely including it, and dissecting carefully below, so that the flexor tendon of the fore-finger was laid in view. The edges of the wound were brought together by ligatures, and dressed as in the leg.

The skin appeared ruffled on the back part of the first phalanx of the fore-finger, on the outer side of the second phalanx, and on the middle of the abductor pollicis muscle. These ruffled parts of the skin appeared so slight, that we thought it sufficient to apply the lunar caustic freely ; and accordingly it was kept applied to
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these parts for some considerable time, so as to produce an escher, and a free suppuration ; and all were dressed with the strong mercurial ointment.

It must here be observed, that, previous to my arrival, Mr. Spence kept bathing the wounds with warm milk and water, and promoted the bleeding, by pressing the blood towards the wounds, and had got the hand and leg involved in a poultice.

During the time of removing the wounded parts, the patient behaved with the greatest courage and resolution ; and he appeared perfectly satisfied that he was safe, even admitting the dog to be diseased. He went to bed about ten, requesting he might be kept quiet.

As we had always understood, that a dog labouring under the hydrophobia would neither eat nor drink, the stomach was inspected ; and, to our great joy, we found the stomach more than half full of food, which had a most corrupt disagreeable smell ; insomuch, that we conjectured the animal had been eating human fæces. This circumstance proved an additional comfort and consolation to
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the mind of the poor man, and led Mr. Spence and me to think the animal was not diseased.

Upon inspecting the mouth, nothing uncommon appeared, except that the inner surface of the lips was much wounded, which had been done by the animal's own tusks in the struggle, as he was held by the upper and under jaw until he was killed.

Left we had drawn a wrong conclusion of the healthiness of the animal, it was agreed that our patient should be put on an antiphlogistic course, and that he should take to-night and to-morrow morning three of the pil. hydrargyri of the Edinburgh Pharmacopœia, and two night and morning, for some time after, I having taken out a box containing forty, formed of five grains each, instead of being formed agreeable to the Dispensatory.

14th December. I visited, and found him easy and satisfied in his mind; the wounds not painful; the pills only produced one free stool.

16th. I visited, and dressed the wounds with the strong mercurial ointment; he had applied

applied a poultice over them the night before ; they appeared a little swelled, with very little discharge.

18th. I visited, and dressed with the mercurial ointment ; a poultice having been applied the night before, a copious discharge of matter mixed with blood had taken place. The leg being more swelled, two of the ligatures were destroying the skin ; these were divided and removed, and a poultice of bread and milk ordered to be applied over the mercurial pledget, night and morning. The mercurial pills, to the extent of two, night and morning, were continued.

20th. I found a free discharge of matter from the eschars made by the caustic. The wounds in the leg being still swelled and inflamed, the ligatures were all divided ; and a poultice, made of the vegeto mineral water, with the crumb of bread, was applied over the mercurial pledget, night and morning.

22d. This morning, instead of the pills, he took the Ormskirk powder, prepared by Mr. Hill, agreeable to the directions, his brother having got it from Mr. Baillie of Mellestone.

stone. This he did merely to please and satisfy his friends, with the approbation of Mr. Spence.

23d. The leg was not so much swelled. It was thought yesterday, that the mercurial ointment irritated the wounds ; and we agreed to dress with the ceratum saturninum, and a poultice of the vegeto mineral water over it, night and morning. The wounds in the hand looking well, with a free discharge from the eschars, we continued to dress them with the mercurial ointment.

27th. I found all the wounds looking well, with a free discharge. The swelling and inflammation abated in those of the leg ; a little luxuriance appearing in the wound ; the mercur. præcip. rub. was sprinkled over it ; and he was requested only to keep the poultice over the leg at night, and to continue to dress the hand with mercurial ointment. He was perfectly well in health, and in good spirits. The pills being all used, we did not think it necessary to renew them. During their use, his bowels were easy, without purging ; they operated by urine, and had slightly affected the mouth.

1st January 1794. The wounds in the hand were cicatrised ; those in the leg incarning, and a good discharge. We occasionally sprinkled the surface with red precipitate, as the luxuriance appeared. To expedite the healing process, the edges of the wounds were brought nearer with adhesive plaster.

6th. I found him walking about in his usual way, as when in perfect health ; which I requested he would decline, until all the wounds were cicatrised.

11th. I learned, that on Thursday the 9th he had become a little uneasy, but could not describe what was the matter ; at one time, he was apprehensive he was going to be attacked with the ague (having once had it severely before), from his having had a coldness and shivering, and he could not keep himself warm ; was neither easy nor comfortable whilst in the house, nor warm out of it. This was, however, satisfactorily accounted for by his wife, who informed us she had that day washed his flannel vest, and he was without a substitute.

It is here to be remarked, that it had been observed he never had become thirsty, or
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asked for a drink between meals, until Thursday and Friday last.

This day I found a hardness round the wounds in the leg, and at times the hand and fore-arm were uneasy, sometimes with a prickling, at other times a sleeping sensation. There was no additional uneasiness in the leg, only the hardness above mentioned. He was desired to walk less, to apply a poultice of bread and milk over the wounds, and to anoint the hand and leg with the mercurial ointment. The edges of the cicatrice of the wound in the palm appeared a little swelled, without inflammation.

In the afternoon of this day he walked about, saw many of his acquaintance, and called upon Mr. Spence, as he expressed himself he was in duty bound, from the great experience of his friendship and attention. At this time, he appeared to Miss and Mr. Spence uncommonly cheerful, distinct, and collected. Upon my departure from the house, his wife followed me, he having omitted to ask if he might go to his father's on Monday, it being a day when the old man had all his family and friends, to congratulate

each other on the return of another year, and indulge themselves with a cheerful glass. This I most readily complied with, provided he rode in a cart, avoided drinking, and came home early.

Sunday, 12th. Neither Mr. Spence nor I visited him this day; but we learned from his brother-in-law, that he at times complained of the hand being uneasy with a prickling starting sensation, which reached to the elbow; and from the wound in the palm he pressed out a little matter.

Monday, 13th. He visited his father, at the distance of four miles, and dined with his family and friends. At dinner, we learned, he was very happy and cheerful; but at tea, expressed his anxiety to get home, which proceeded from the directions given him on Saturday. This he accomplished between six and seven in the evening, travelling in a cart.

Tuesday, 14th. All this day he was in perfect health, and free from any complaint; he walked about in various fields with his master, Mr. Slight, and partook of strong ale with him at the toll-bar house, distant about a quarter of a mile from his own.

Wednesday, 15th. This morning he was seized with a nausea, and strong desire to vomit, and, in the forenoon, occasionally brought up mouthfuls of what they termed yellow stuff, which to him had a bitter, sour, disagreeable taste; and he had an oppression about the region of the stomach, breast, and bowels. Mr. Spence being from home, did not see him until eight in the evening, when he prescribed a solution of emetic tartar; which operated well, freeing him from a large quantity of bile. It is here to be observed, that at this time he drank freely of warm water, during the operation of the emetic, and showed no aversion when it was offered him. Mr. Spence staid until he was settled from the fatigue of the emetic, which was after ten, and left him with the assurance, that all the oppression at the stomach, breast, and bowels, was removed. He had a desire to sleep; his pulse was at this time eighty, small and hard.

Thursday, 16th. This morning, about ten, Mr. Spence visited, and found him fretful and uneasy, pulse 100; upon inquiry, found he had no sleep during the night; and, towards morning, the oppression at the breast,

stomach, and bowels, returned, but not to so great a degree as yesterday; and he did not like to move, for fear of fainting. Having had no stool in the course of yesterday, or after the emetic, Mr. Spence proposed, and sent him a solution of salts, which he attempted to take, but could not. To use his own words, his heart recoiled. The idea made him sick and faint, he therefore begged to be excused.

At mid-day Mr. Spence was in Dunbar, when we agreed, that so great an appearance of bile rendered a laxative necessary, to carry it downwards, and fixed on the castor-oil; which, to render it more pleasant, and more easily taken, was made up in the following mode.

R. Pulv. Gum. Arab.

—— Sacch. Alb. singulorum drachmas tres
solve in Aq. Font. unciam dimidiam,
adde paulatim Ol. Ricin. unciam unam
cum semisse Aq. Font. uncias duas. *M.*

Half of this was intended to be taken at once; and if it should not operate in the course of three hours, he was then to take the other half.

In the afternoon I went out, taking the laxative with me, and got there between

three and four. I found him in a profuse perspiration, which had continued since morning, unsupported by food, or any liquid; which he said he avoided taking, for fear of increasing the uneasiness which he felt about the stomach and bowels, which, if increased, he would be in danger of fainting. He had nausea, and at times attempted to vomit; the pulse hard and firm, at ninety. I would at this time have taken eight or ten ounces of blood, had the perspiration not been so profuse. The great and first object appeared to be gently to open the bowels.

When I informed him of having brought the laxative, and expressed my desire of his taking it, he said, he would most willingly take any thing, but was afraid to eat or drink, for fear of adding to the oppression at the stomach and bowels, and fainting; that he was afraid he had offended Mr. Spence in the morning, by refusing the salts, which he could not avoid, but would now summon up all his resolution, and take this.

I tried him first with a little small-beer made milk warm; and as he did not wish to take a large draught, he took it with a table-

spoon. The first spoonful was with some degree of agitation, the following with ease, while he at the same time observed the first was the worst. In this way he might have taken about a gill and a half.

About a quarter of an hour after, I tried him with half the quantity of the laxative julep, having, at his desire, made it milk warm. He insisted on helping himself, and taking it with a tea-spoon. At first, upon touching his lips, he appeared a little agitated, and startled, and by a forcible inspiration got it over, and as it descended to the stomach he sighed. Upon asking, why he sighed, he said, he could not help it, for it was like to make him faint, and produced a desire to vomit; and lest he should vomit, he would not take it all at once. So that, from the time of his taking the first of it, till he had taken the whole, might be about three quarters of an hour. Upon my arrival, I desired some beet-tea to be prepared, to support the system, and dilute the bile, during the operation of the laxative.

In about twenty minutes from his getting the last of the half, he had a most offensive bilious

bilious stool; and it afterwards produced in all fix, equally offensive and equally bilious.

He frequently had a desire, and did retch repeatedly during the operation of the laxative, and at first brought up only a few mouthfuls of bile; but what was vomited afterwards appeared only to be the mucus of the stomach.

As I frequently gave him of the beef-tea, during the operation, there were evident symptoms of the irritability of the system being preternaturally increased, from the sighing and a degree of horror on the taking of it. Sometimes this was evident at the sight of it when presented to him.

But this increased sensibility was not confined to fluids alone. The impression of the air produced it, when any of the doors happened to be left open, or any of the women moved quickly through the house, so as to agitate the air. Upon these occasions, he repeatedly declared it was killing him; at other times he said it was taking away his breath, and like a knife entering his stomach and breast.

Even the sense of smelling was preterna-

turally increased. Upon a friend approaching unexpectedly near him, he was startled, and requested he would withdraw, as he had been drinking spirits, the smell of which was like to take away his breath.

I staid until past eight, and I left him very much relieved, so that he took of the beef-tea freely, and did not sigh upon the sight or taking it, and was able to sit erect upon the bed, without the dread of fainting.—The free perspiration still continued, and care was taken not to check it during the operation of the laxative, by keeping the blankets about him when he had occasion to rise.

My opinion at this time may be formed from a few lines I dropt Mr. Spence previous to my departure, which I shall subjoin.

“ Dear Sir,

“ Upon visiting Thomas Hogg this afternoon, it appeared that his stomach and bowels were loaded with bile. In short he had all the symptoms of those who are seized with the yellow or bilious fever, such as the loss of strength, nausea, a load and oppression
about

about the præcordia, sighing, irritability, &c.

“ I found the pulse ninety, hard and strong; the whole body in a profuse perspiration. It was with much difficulty he was prevailed upon to take the laxative. He took half the quantity, at different times, being afraid, if he took it all at once, he would reject it.

“ About twenty minutes after taking the last proportion of the half, it produced a very offensive, copious, bilious stool. It is now past seven, and he has had three equally offensive, copious, and bilious; the pulse seventy-six, with a degree of softness which I like.

“ I have got beef-tea prepared for him; and if you think well of it, we will make it his common drink. After the first stool, he vomited freely of bile.

“ It appears this is entirely a bilious fever, from the sudden and great prostration of strength. At times the prickling and loss of sensation in the arm, which, in those cases I have known, were general over all the extremities, and in one case over the whole body.

“ The indication of cure appears to me, after the stomach and bowels have been cleared,
immediately

immediately to begin the bark, in half-drachm doses every hour, or hour and half, if the stomach will retain it ; and to each dose may be added, for the first six, four or five grains of rhubarb, so as gently to carry down what bile may yet remain in the bowels. To morrow, if nothing forbids, and you think well of it, we will follow this mode of treatment. Lest I should not be able to get out so early as I wish, you will make a beginning. Until then, I think, if he takes freely and frequently of the beef-tea, it promises to answer best to wash of and dilute the bile, and at the same time support the strength without irritation.

“ The smell of the beef-tea is now refreshing, and I am pleased to see him take it so freely ; for before the stools it was to him very nauseous. This is no doubt a good sign.

“ At half past seven, the pulse is soft, at eighty ; and he appears greatly relieved. I am, Dear Sir, yours sincerely,

“ A. JOHNSTON.”

To the Rev. Mr. Spence, }
Cockburnspath. }

I left him soon after eight, continuing easier

sier, and taking freely of the tea, of which several pounds were left prepared for his use during the night. He was still in a profuse perspiration, and could sit up with freedom, which he could not do before, from fear of fainting.

Friday, 17th. Mr. Spence visited him about eight this morning. He complained of having had a very bad night, without sleep, and towards morning the constant danger of fainting came on, his pulse being about 110.

It must here be observed, that from the time I left him last night (past eight) to eight this morning, he had taken six pounds of beef-tea, in which was occasionally mouldered a little bread.

At his own desire, about nine, a cup of bohea tea was prepared, with a piece of toasted bread, of which he eat about an ounce; but after repeated trials, he found himself unable to let over a single drop of the tea; as a tightness had now come over his throat, and the oppression of the breast and stomach were greater than yesterday.

Several attempts were made this forenoon to persuade him to try a little of the beef-tea,
and

and as he always insisted on helping himself, or taking it with his own hand, after a tremulous motion of the upper extremities, he brought the spoon to his lips, and frightenedly put it from him, declaring, with vociferous agitation, he could not take it.

Between ten and eleven, a convulsive motion came on over the whole body, when he appeared to be in great agitation, crying out to set up the window for air, for he was gone.

Before twelve, I saw him as described above, the pulse 90, small and hard. He was perfectly sensible and collected; but he could not now endure the sight, or even hear the motion or barking of his own dog, or any other. The impression of the air at times distressed him much. To use his own expression, these went to his heart like a knife. At other times, the air was agreeable. But, when the convulsive motion of the stomach and diaphragm took place, then he would call out to open the window, hold his head over the bed as if to vomit, when he would bring up a mouthful of mucus and saliva, which he forcibly spit out, it evidently appearing

pearing that the taste or sensation of these secretions was at that time very offensive, and the cause of much irritation to the system.

As he perfectly resisted all intreaties, and our attempts to give him any thing by the mouth, and as the spasmodic and convulsive affection appeared so great, Mr. Spence and I agreed to throw up into the rectum three drachms of laudanum, in four ounces of beef-tea every two hours, and to anoint the stomach, breast, and belly with the same.

I must here observe, that from my arrival the secretion of saliva rapidly increased, which he always forcibly spit out, not directly at any person, or any particular place or substance, but in the direction in which his head was lying. And I may further observe, that he became much startled when any person touched him unawares, which induced me to desire he would not be startled when I was about to give him the injection. But upon touching the anus with my finger, as a direction for the tube, I found the buttocks and thighs convulsed; and when the liquid was thrown into the intestine, the agitation and convulsion became evidently increased.

Soon

Soon after the introduction of the laudanum, he freely made water in bed ; at which he expressed himself ashamed, as it came away involuntarily.

At the expiration of an hour, he became calm and settled, thanking God he was now easy, and prayed he might so continue, as he now found himself a different person.

We now requested he would take a little nourishment, which he begged we would not urge, for fear of making him worse.

During this intermission of ease, I went up with Mr. Spence to his house. But we returned in an hour, when we found the ease in which we left him did not continue above half an hour ; and he had again become strongly convulsed, and sighed more frequently, with a greater secretion of saliva and mucus from the stomach, which he spit out in mouthfuls more forcibly than before.

We wished to repeat the injection, to which he would by no means submit ; neither did we think it practicable to use force, so strongly had he become convulsed. He desired we would not insist ; said that he had done with us ; and that what time he had now left, would be

be employed in making his interest with Christ.

Mr. Spence spoke comfortably to him, to which he listened with great attention, saying, he now hoped he had his interest secured. He called his family and friends, Mr. Spence, and myself, to his bed-side, and bid all farewell. He was sensible, rational, and distinct, when he had any respite from the convulsions; alternately employed in taking leave of his friends, and making peace with his Maker; perfectly resigned to the will of Providence.

Soon after four in the afternoon, the convulsions became stronger, himself insensible and outrageous, so that two men were necessary to keep him down. His pulse at the wrist became indistinct, but a strong pulsation of the temporal artery was evident; a larger quantity of saliva continued to be secreted from these glands, and mucus from the stomach; insomuch that his constant employment was spitting and vomiting.

He continued in this situation until about half an hour past six, when he expired, to the great satisfaction of his friends, and every
one

one concerned. I must observe, that he neither offered violence to himself, nor violence to his friends and neighbours; neither did he imitate the actions of a dog in any way.

I must here also observe, that after he became insensible and unmanageable, he attempted frequently to scratch his breast, as if itchy, when an effusion of the blood immediately appeared to have taken place in the cellular membrane, by the part becoming highly inflamed; and at his death it had a livid appearance.

Nothing uncommon appeared about the wounds in the hand; those parts near to the wounds in the leg, were a little hard, without inflammation.

No enlargement about the throat or salivary glands could be observed; no inflammation was evident about the mouth; nor was there any enlargement of the tongue.

We were not permitted to inspect the stomach, bowels, or thorax.

VI.

Histories of Cases of Petechiæ sine febre terminating fatally. Communicated in a Letter to Dr. Duncan, from Dr. William Tatterfall, Physician, Liverpool.

FROM the politeness and attention with which you treated me when a student, as well as from the general interest you take in the pursuit of truth, I am persuaded that you will give the following account a candid perusal; and that, if you think it worth a place in your very useful Commentaries, you will not withhold it.

Accounts of cases, when faithfully given, are often almost equally useful, whether the treatment has been successful or not. To know what remedies will not succeed, especially if they were probable or popular, is the road to learn what will succeed; and, from these negative accounts, there is frequently

more light thrown upon the nature of diseases, than from the most flattering testimony to the efficacy of medicines.

The disorder of which I am about to give a few cases, having been known only of late, and treated by few writers, has not yet obtained a fixed appellation. It has been called by different names, of the respective propriety of which the public must judge. Graaf has called it *Petechiæ sine febre*. You, Sir, have called it *Petechianosis*, or *Aimorrhœa*. Dr. Adair, joining both names, has called it *Hæmorrhœa petechialis*. I confess, that at present I am inclined to think, that it ought to be called either *petechiæ sine febre*, or *petechionosis*; for I have not found the hæmorrhage either constant or considerable.

Of this disorder I have seen four cases. The first was a woman, of the name of Mary Ferris, aged forty-five. She was the mother of a number of children; if I recollect right, six or seven. She said, that the last labour but one had been exceedingly long and painful; and that, since this time, she had been much troubled both with *leucorrhœa* and *menorrhagia*. She seemed to be in poor circumstances,

stances, and to have lived sparingly. She had been delivered about eight weeks before I saw her, without any particular circumstances occurring; but she had not recovered well; and she had laboured under the complaint above mentioned for six days. She had no hæmorrhage; and the discolourations of the skin were rather vibices than petechiæ. The prostration of strength and appetite were considerable, but not great; the pulse was sixty-eight; and she had no febrile symptoms. Under the direction of the apothecary of the Dispensary, she was taking, every second hour, a wine-glass full of a mixture which we call *Mistura Peruviana Vinosa*. This is merely equal parts of decoction of Peruvian bark, and domestic or raisin wine. She was also taking a grain of opium every night. I changed the mixture, and substituted the decoction of bark, acidulated in the proportion of two drachms of the diluted acid of vitriol to eight ounces of the decoction, to be taken at the same distance of time, and in the same quantity; but directed, that in the intervals there should be taken as much red Port. I directed that the opium should be

continued, and ordered mild laxatives occasionally. The disorder had not yielded to the remedies of the apothecary ; nor did it yield to mine. I next employed the Peruvian bark in substance, and in greater quantities. I also increased the dose of the other remedies, but without any benefit. This case occurred during the first part of summer. The patient expressed a desire to have salad, if I thought it proper. I neither had given, nor was able to give, any remedy that was of service ; and I did not think it right to refuse her. She thought she found considerable benefit from the salad, of which I understood she took a large quantity. It did not, however, effect a cure, for she died in three or four days after she began to take it.

The next case was much more singular. A family in the Work-house, of the name of Clarke, had the itch. The mother of the children was extremely clamorous and impertinent ; she was continually asking for wine, and other nourishment, merely because the children had the itch. I understood that she bore a very bad character in the buildings, and accordingly they disregarded her.

In

In a few weeks after this, she appeared with one of the children, a boy of about four years old, with a few distinct purple eruptions upon his body; he had a good appetite and good spirits, and played with other children in the court; his pulse was natural. I supposed this appearance might be some remainder of the itch, or some effect of heat or dirt, and took no farther notice of it. In about a week, the mother brought him again, and he had near four times the number of eruptions; and they were of a darker colour. He was languid, but he continued to walk out, and had a tolerable appetite. I then allowed him milk diet, and a little *vinum domesticum*, thinking his mother would be more likely to give this than medicine. I directed him to be kept as much as possible in fresh air, but not to walk much. He remained much the same for some weeks. I wished to have ordered medicine, but despaired of the mother giving it to him. I, however, ventured to order an acidulated decoction of bark, and directed it to be made as pleasant as possible with syrup, in hopes that he might be induced to take it. The mother said that she gave

it, but the clerk found a bottle full in her house; and it was generally supposed that she did not give any of it. I then desired the clerk to see an anodyne draught given at night, which I believe he did for several nights. The spots afterwards became extremely numerous and vivid. The strength and appetite were gone, but the pulse was not quick; and there was no preternatural heat. There was never any hæmorrhage. I now ordered bark in substance, and the pulvis stypticus; but I believe they were never given, unless when the clerk, or some neighbour, saw now and then a dose given. I mentioned the case to two of our physicians, whom I happened to meet, and offered to shew it to them. They agreed to go with me next morning, which they did. But when we came, we found, to our surprise, and to some degree of temporary confusion in myself, that fever had supervened. The pulse was so quick, that it could not be very accurately counted; I think it was near 160. The child died in the evening.

Some months after my time of attendance at the Work-house had expired, Dr. M'Cartney
was

was attending; and he told me that another child of the same family was labouring under the same disorder, and took me to see him. What his treatment was, I do not particularly remember; but I dare say it was very proper, according to what is generally supposed of this disease; but he told me that the mother did not do justice to the child, and that he suspected the medicines were not given. This child died a few days afterwards. The parents were small hardy-looking Welch people, and had no appearance of scrophula. They would take care that neither they nor their children were starved, while they were kept by the public.

The fourth case was Thomas Freeman, aged sixty-two. He had lived in part of a house as a lodger, and generally dressed his own provisions. He appeared to have a dread of poverty, and to have lived very sparingly. For some days before I saw him, he had laboured under considerable weakness, attended with epistaxis, and large discolourations of the skin, which were a kind of vibices; but amongst them, there were many small bright petechiæ; the pulse was natural; the appe-

tite tolerable. He could walk a little out to see his neighbours, and was rather unwilling to be confined; but was very tractable. I ordered vitriolic acid, bark, and wine, which I believe he took very regularly, but without any benefit. I then ordered him to take as many oranges as he conveniently could, and to continue the wine. The vibices decreased, but the petechiæ increased very fast. He seemed, however, to be more cheerful, but did not gain any strength. In three days after, he began to live almost entirely upon oranges, to which he added a little gruel. He was removed to the house of a daughter, in a distant part of the town, and walked to and from the hackney-coach. After this he was unable to rise from his bed, grew worse very rapidly, and died in about two days.

From this account of an almost total want of success, and from the other cases which are published, I think it is evident, that we do not yet comprehend either the nature or the cure of this disease. It has certainly a considerable resemblance to scurvy, and appears to yield the most to similar remedies; but where scurvy affects the patients no more

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than

than this disorder does at first, it yields to the remedies with much greater certainty and rapidity.

In the next case that occurs, I will try the carbonic acid, ripe fruits, and brisk fermented malt-liquors.

VII.

History of a Case of Polypus in the Vagina successfully treated. By Dr. William Paterson, Physician, Londonderry.

IN July 1773, being desired by an old physician, who did not practise midwifery, to examine the situation of a printer's wife, aged forty-five years, I found a very large tumour, suspended by two considerable cords, hanging entirely on the outside of the labia pudenda. Of the patient's preceding condition, I received the following account.

For four years past she had been subject to fluor albus, and uterine hæmorrhage; the latter of which, about a year and a half ago, proceeded to an alarming extent, and was attended with the expulsion of a membranous bag, supposed to be the substance of an early abortion. Soon after this event, she was seized with a retention of urine, which produced a great distension of the bladder, and
was

was accompanied with a very painful weight in the inferior part of the pubes.

To obtain more satisfactory information, and thence devise the best measures for relief, the doctor now ordered a midwife to introduce a hand into the vagina; whereby was discovered an extraordinary lump, which being pushed up, the patient had a plentiful discharge of urine.

The leucorrhœa and menorrhagia, in turns, continued until the day before I saw the poor sufferer, when she was seized with pains like labour pains, which in a short time, but by degrees, protruded the tumour in the state in which I found it. When entirely expelled, it resembled a prodigious fleshy mass, in general of a red-inflamed colour, except the lower end, which had a livid hue. Strong pressure with a finger, and free incisions with a scalpel, did not excite any pain in the tumour; nor was it in any ways troublesome, unless by its great weight and magnitude.

Ligatures being passed round the two stems, from which the tumour hung, (and which were about one inch in diameter), it was severed as high up as possible, but not
without

without the patient expressing pain from the first touch of the knife. The shape of the extirpated mass resembled that of a pear, and measured twelve inches in length, and fifteen inches in circumference. Upon cutting into its substance, it was found very much consolidated; an irregular fibrous texture could be traced in many parts; and so smooth were the sections made by the knife, that they exhibited the appearance of the internal cavity in the gizzard of a fowl; especially in the centre, where such a space was pretty evidently formed.

That part of one of the stems, which was below the ligature, dropped off in the course of a few days; after the interval of a few more days, the other did so likewise; and both occurrences were accompanied with a general uneasiness, which was followed by a sanious discharge from the vagina, but of no long duration, nor in any great quantity.

Light animal food, wine, and occasional opiates, were the principal means used during the treatment of this case, until the patient was so far restored, as to be able to walk
about,

about, which she could do pretty well, in less than five months.

For some years afterwards she was weakly, and was subject to uterine hæmorrhage, and partial descents of the vagina ; but is at present (1795) in as good health as can be expected in a person of her age, and is less debilitated than she was twenty-five years ago, when the causes of the polypus seem to have commenced their operation.

VIII.

A Case of the successful treatment of Locked Jaw, Opisthotonos, &c. occasioned by a wound of the fore-arm, communicated to Dr. Duncan by Dr. John Mackie, Physician, Southampton.

OF late the minds of medical practitioners seem to be divided on the subject of the treatment of tetanus. The use of opium and the warm bath, particularly in that species of the disease arising from wounds, has been long ago found of specific efficacy by physicians of reputation and authority; and my own experience has more recently afforded me the most unequivocal proofs of the success of the same remedies in this disorder. Yet from some cases lately published, I am sorry to see something like a want of sufficient confidence in that practice; to see it too lightly relinquished by men otherwise ingenious, but perhaps impatient; and the bark, wine, and

and the cold bath substituted with much less decided effect.

Idiopathic tetanus, properly so called, I fancy, is seldom to be met with in this country ; at least, in a long practice, I have never known an instance of the genuine locked jaw, opisthotonos, and other symptoms similar to those accompanying wounds, to arise from any other cause. 'Tis true, I have occasionally seen spasmodic affections of the face, difficult deglutition, rigidity, torpor, and convulsions of the other muscles of the body, without wounds, but evidently belonging to the common class of spasmodic and convulsive disorders ; and being connected with a weak and irritable fibre, with hysteria, paralysis, epilepsy, &c. they may have sometimes found a remedy in the use of tonics and the cold bath. But the tetanus occasioned by wounds, punctures, or lacerations of muscular or tendinous parts, appears to me a disease altogether *sui generis*, being strongly and distinctly marked by the following symptoms, viz. a rigid and long continued immovable state of the different muscles belonging to the jaw and neck ; a retraction of the mouth or *spasmus cynicus* ;

cynicus ; a singularly acute pain at the bottom of the sternum ; a recurvation of the spine ; a persevering stiffness and contraction of the dorsal, lateral, and abdominal muscles, extending to the lower extremities, and perhaps more or less to every muscle of the body ; and particularly, by this state of spasm approaching gradually, with little or no alteration, as in other spasmodic affections, remaining much longer in a fixed state, and never relaxing entirely till the end of the disorder. In the course of my practice, I have met with two cases of the disease, accompanied with most or all of the above symptoms, both of which yielded to the use of opium and the warm bath. I transmit to you the most severe and most remarkable one ; which, as it proves to my mind the complete success of the remedies under the most desperate appearances, and also coincides with the experience of some of the most respectable men in the profession. I hope its publication may give courage to those who meet with the disease for the first time, to administer the opium freely, and satisfy the minds of others as much as I am satisfied myself, that we may
trust

trust as fully to opium and the warm bath in tetanus from wounds, as to mercury in lues, or to the Peruvian bark in intermittent fevers.

EDWARD SAUNDERS, a boy fifteen years old, of a healthy habit of body, walking by the side of a plough at work in the field (March 8th), was suddenly thrown down, by the horses taking fright, and dragged along with the plough upwards of a furlong before they could be stopped. On taking him up, the ploughshare was found so closely wedged between the bones of his left fore-arm, that it required some force to separate them : but, except some slight excoriations, there was no other mark of violence on any other part of his body. A handkerchief was wrapped about the wounded arm, and the boy carried home in a cart. On examining the wound, the surgeon found it extended about four inches in length from the lower and back part of the wrist, where the metacarpal bones join those of the carpus, to about three inches above the lower extremities of the bones of the fore-arm. The teguments and tendons

were much lacerated, two of the carpal bones laid bare, the ulna exposed about two inches, and fractured at the lower neck, and the membranous ligament, connecting the radius and ulna, was torn as high as the wound went. The radius continued covered with the common integuments on the inside ; the radial artery escaped safe, and there was but a moderate hæmorrhage from the wound. After cleansing it from the dirt which had been forced in by the plough, it was properly dressed, and the arm laid in an easy twelve-tailed bandage.

9th. The patient had a restless night ; his arm in pain till midnight, but since easy. It had bled a little, and there was much ferous transudation. He was feverish, and was ordered to drink freely of saline mixture and barley-water.

10th. Fever abated. Had some sleep in the night. The arm continues easy, though a good deal swelled above and below the bandage, which was taken off, and a poultice applied.

12th. Has had two good nights, and very little fever. The tension and swelling lessened.

ed. On removing the dressings to-day, there was a large discharge of well-digested pus. The wound looked clean; the edges a little inflamed. The fractured parts of the ulna white, and in exact apposition; fomented, and dressed with dry lint.

14th. Fever quite gone. Appetite returned. Tension about the wound inconsiderable. A copious discharge of good matter. Granulations appear; edges white, and disposed to heal. In consideration of the discharge, he now took half a drachm of the bark three times a-day.

20th. Continued well in health and spirits. Walked about in the day-time with his arm in a sling. The wound had every day the wished-for appearance. The bones were covered with good granulations; the discharge grew daily less and thicker; and to-day the wound was actually diminished one half of its original size.

21st. This morning the scene was greatly changed, without being able to assign any other cause for it, than that he had an uneasy dream in the early part of the night; in which, he thinks, he moved his arm suddenly; since which he had been restless, and

complained of frequent startings in his arm ; and of stiffness and pain about his throat, when he attempted to swallow. The appearance of the wound was much altered ; the discharge had penetrated through the bandage ; and on taking off the dressings, appeared thin, crude, and oily. The granulations, which before had been solid, bright, and pointed, were in one night become turgid, pale, and smooth ; and the edges put on a red flaccid appearance. I was called in on the afternoon of this day, and found the symptoms as above represented. The boy looked as if he had been crying. He could not separate his fore-teeth wide enough to admit the end of my finger. His lower jaw was stiff, and drawn backwards ; and the masseter, the mastoid, and other muscles of his jaw and neck, felt quite rigid and distinct. I did not hesitate to consider the case as an approaching locked-jaw, and a proper one for the trial of the opium. I therefore prescribed tinct. opii. Pharm. Lond. gr. xv. ex cochl. larg. ij. misturæ camphoratæ, tertia quaque hora ; and the neck and jaws to be rubbed with the following : *R.* Liniment. ammoniæ uncias duas. tinct. opii unciam unam. And as he always

ways seemed to receive a temporary relief from this embrocation, it was used night and morning through a great part of the disease. The arm was fomented in the evening.

22d. Has had a restless night, though since yesterday evening, he has taken ninety drops of the tinctura opii. His jaw is stiffer, and more immovable. His face much wrinkled, and the muscles of his neck as hard as ropes. Pulse small and quick. Sweated much about the face and neck; and had some difficulty in making water. Spasms in the arm continue. The external appearance of the wound much as yesterday, rather more turgid, spongy, and glossy. The fibres seemed drawn together at one place, where the discharge issued, which to-day was copious, thin, and foetid; and they suffered that sort of motion we may observe in the cellular membrane of some new-killed animals. On introducing the probe, after a turn or two, it passed down to the bone, which was felt bare and scabrous along the whole of the lower end of the ulna; and the hand below the wound had a cadaverous look. Amputation was now deemed necessary to add to the patient's chance of living, and was de-

terminated on for the next day, if no amelioration of the symptoms appeared. In the mean time, warm fomentations were ordered to be assiduously repeated; and the dose of tincture of opium to be increased to twenty-five drops, in the same vehicle, every three hours, through the next twenty-four.

23d. Has taken 175 drops of the tincture since my last visit. His night but indifferent; much starting, and no continued sleep. The tightness and rigidity about the jaw and neck the same. He could with difficulty admit the spout of a tea-pot betwixt his teeth. Complained of stiffness about his belly and sides, and of pain in turning himself. The convulsive motions of the arm continue; and the appearance of the wound is in every respect the same as yesterday; viz. altogether the reverse of the healing process. The surgeon met me by appointment. Every reason seemed to press the amputation of the fore-arm. It was accordingly very well taken off to-day, at about four inches below the elbow; and the boy bore the operation unexpectedly well. I prescribed the tincture to be continued in in the same dose as yesterday, and added a
pill

pill of three grains of solid opium at bed-time. Whilst he could not swallow solids, or masticate them, his diet, now and afterwards, was chiefly panada, milk-porridge, gruel, and broth; his drink, barley-water, and sometimes wine-whey.

24th. Passed a tolerable night, though generally awake. Had frequent startings of the stump-arm. The contraction of the jaw, and stiffness of the abdominal muscles as before. Was thirsty, but not hot. Ordered a pill of one grain of opium to be taken with the twenty-five drops of tincture, every three hours, in a dose of saline mixture.

25th. Had some short sleeps in the morning. The jaw remains in the same fixed state. The spasms of the arm continue, and alternate with a pain under the sternum; which is sometimes so acute as to make him cry out. Pulse still small and quick, and the face, neck, and breast covered with a thick miliary eruption, and a profuse dropping sweat. These symptoms continued more or less to the end of the disorder. He has had no stool since the 21st, and made no water since the 22d; yet there is no fulness about

the region of the bladder, the abdomen being uncommonly hard and flat. Ordered a laxative clyster to be thrown up; and the belly to be well fomented with stupes wrung out of hot water, and applied from the sternum to the pubes. Increased his opiate to two grains of opium, and to thirty-five drops of the tincture every two hours, in a dose of a neutral mixture made with the kali acetatum.

26th. Has dosed a good deal, yet is always sensible on being roused; and has not to-night complained of so much pain. The jaw is a little more open, though the rigidity of the muscles of the neck continues the same. The clyster returned by itself; and he made about a spoonful of very thick water in the night with much difficulty. The stump was dressed to-day; had a large thin discharge; looked foul; and was several times involuntarily drawn towards his side while dressing. I prescribed the opiate to be continued in the same dose and manner as yesterday.

27th. Had an indifferent night. Complained at times of shooting pains at the bottom of the sternum, and of more spasms in the stump.

The jaw was more stiff, and closer. The cheeks were so much retracted to-day as to expose almost all his teeth; and the rigidity seemed every where to increase rather than diminish. Though he generally took his medicines willingly, he had so much difficulty in swallowing the little pill, and even in getting it within his teeth, that he begged to have it changed for some other form; and also that his mixture might be less nauseous. I therefore ordered two grains of powdered opium, mixed in a little currant-jelly, every two hours; and a pleasant julep, containing six drachms of the tincture by measure, to be consumed in the next twenty-four hours.

28th. Has had a dozing night, but was always willing to be roused to take his opiate and thin nourishment; pulse small, and 110 in a minute; no great heat or thirst; general symptoms the same as yesterday; rigidity seemingly permanent, and extending to more muscles; ordered the opiates to be persevered in through the next twenty-four hours, as through the last.

29th. He has taken his medicines punctually; and the opium seems to have the effect
of

of keeping him a-dosing, and tolerably tranquil state (a happy effect enough), but nothing farther ; the other symptoms at a stand ; if any change, rather on the wrong side ; the jaw as much locked as ever ; the rigidity of the neck, thorax, and abdomen, undiminished ; and to-night seems insidiously to have extended to the muscles of the inferior extremities, which are stiff and unpliant ; the stump has still a dusky look, with a thin ichorous discharge ; and the dysury and costiveness continue, notwithstanding the use of repeated fomentations and clysters.

My patient having, during the last forty-eight hours, taken forty-six grains of opium, and an ounce and a half of the tincture, without getting any ground, I confess, I began to have my doubts of the specific power of my remedy. I was afraid to increase the dose, and resolved to put its utility to the test, by diminishing it exactly one half through the next twenty-four hours.

30th. I had this morning reason to repent of my yesterday's determination. His attendants told me, " that he became uneasy " in the afternoon, and in the evening had
" more

“ more spasms in his arm, and more pain in
“ the epigastric region ; that he had had a
“ terrible night, without any sleep ; and that
“ they thought he never would have seen the
“ morning ; that he was almost constantly
“ agitated with alternate convulsions and
“ tremblings of his whole body ; that the
“ first were often so violent, that he would
“ have been pushed off the bed, towards the
“ side or foot, if they had not watched him,
“ and opposed his falling out ; that he ge-
“ nerally screamed out like a person in tor-
“ ture, before the spasms came, and com-
“ plained of pain darting through his body,
“ and was scarcely sensible any part of the
“ night.” His jaws were now so fast clenched,
that they would not admit the edge of a
tea-spoon ; and his cheeks were drawn to-
wards his ears in such a way, as to give him
an ugly grin. The rigidity had now seized
his whole body, which, from his neck to his
heel, was perfectly inflexible ; his head was
retracted, his spine recurvated, or bent in-
wards, and his body upwards, so as to form
an arch with the bed, in which a pillow might
be placed ; and, on attempting to raise his
head,

head, his whole body lifted to his heels, as if it had been one long bone without a joint ; he had some painful spasms while I was with him, looked wild, seemed to lie in an odd posture, and answered incoherently the questions I put to him ; his pulse was quick, contracted, and intermitting, and he was covered with a profuse cold sweat.

I now almost considered it as a lost case. It appeared, if there were any hopes, they must rest on the opium, which evidently influenced the disease ; yet the disease seemed too inveterate, and the body too exhausted, to expect much from any remedy. I determined, however, to push it vigorously, as a last resource. My only fear now was, that I might not get him to swallow enough ; for he was not able to take even liquids but in small quantity, being obliged to suck them through his teeth, and having more than ever a difficult deglutition. I directed two tea-spoonfuls, holding together full 150 drops, of the tincture of opium to be given, mixed in a little wine, every two hours, till my next visit ; and administered the first dose myself before I left him.

31st. Having given orders that the tincture should be administered as punctually as possible, I found that during the last twenty-three hours he had taken two ounces and an half, all to about half a tea-spoonful. Had I found him after this dead, I own I should have been at a loss, whether to have attributed his death to the disease or to the remedy. I only thought myself justified by the observation of Celsus : “ *Melius est, anceps auxilium experiri, quam nullum ;*” for I certainly had never seen so much opium given in the same space of time, and to so young a patient, in any disease whatever.

To my no small surprise, however, the answer to my first inquiry this morning was, “ that they thought him better ; that he had “ been in a dosing state all night, and been “ more free from pain, spasms, and trem- “ blings.” He was now dosing ; yet on being roused he seemed in his senses, though he fell asleep while he was speaking. His jaws were evidently more separate ; but he had still much labour in swallowing the thinnest liquids ; the spine and whole body equally stiff and rigid as yesterday ; the discharge
from

from the stump uncommonly offensive; no stool or urine could be procured; a clyster had been attempted, but the pipe was with difficulty forced into the rectum, and very little of the clyster went up. I ordered him to be put into a long bathing-tub filled with warm water, and to remain in it for about fifteen minutes, and his body to be well rubbed while in the bath; and as the opiate at least mitigated his sufferings, I prescribed the tincture to be continued as yesterday in the same dose.

April 1st. In the course of the last twenty-four hours, he has taken full two ounces and an half of the tincture; has had a quiet night, free from spasms, except some of the stump-arm; no pain or convulsions; the jaw much as yesterday; swallows somewhat easier, and is thirsty; the rigidity from neck to heel much the same, only his spine comes a little nearer to the bed. When he was in the bath yesterday, he sweated much, and complained of fatigue; I had him put in again to-day, while I was with him; it was curious to see how much he resembled a statue, there not being the smallest flexion at any of his joints, (that of the elbow of his right arm excepted, which

which had a little imperfect trembling motion). His belly was hard, and quite incompressible ; nor did it appear at all to yield to the descent of the diaphragm in inspiration ; he expressed a liking to the feel of the warm water, which was about 102 of Farenheit's scale ; and I let him remain in it about twenty-five minutes. On coming out he had a small hard stool, the first since the amputation ; and he discharged about three large spoonfuls of very thick urine.

The opium having had the decided effect of giving my patient two comparatively tranquil nights, of almost removing the convulsive spasms, and of at least arresting the violence of the other symptoms, without inducing any one sensible inconvenience, I thought I had sufficient encouragement to continue it in an undiminished dose ; and therefore I ordered the same quantity of the tincture to be consumed in the next twenty-four hours, allowing some latitude as to the hours of giving it.

2d. Has had another dosing night, without making any particular complaints. Has since yesterday taken above two ounces of the tincture, and was always ready for his dose ;
the

the symptoms much as yesterday ; is able to take his panada of a better consistence ; the recurvation of the spine, I think, yields a very little ; yet, on putting him into the bath to-day, he lifted all in a piece like a mummy, or a dried preparation, and had not the least flexion in the water ; spasms are at times still felt in the stump-arm, and the discharge continues thin and foetid. Wishing to join the bark with the opiate, without lessening the dose of the latter, I prescribed as follows :

R. Decoct. Cinchon. colat. uncias xiv.
tinct. opii unc. ij. *M.* F. Mistura ;
cujus coch. larg. iv. (circiter uncias ij.)
3tia. quaq. hora sumend. Pergat uti
balneo tepido, per tertiam partem horæ,
quotidie.

3d. 4th. and 5th. The symptoms continued through these three nights and days, with very little change or abatement ; he kept his ground at least, if he did not get much ; the rigidity every where remained nearly unchanged ; he dosed and slept a good deal, but when awake was sensible and in spirits ; he continued to perspire profusely, and was often hawking and spitting ; these four days has
had

had no stool, nor passed any water, but in drops, and with great difficulty. At first I was afraid this might be occasioned by taking so much opium; but am since convinced it was wholly owing to the sphincter muscles of the anus and bladder, partaking of the general spasmodic stricture. He consumed the pint-mixture with the decoction of the bark, in the first twenty-four hours; but he complained of its giving him nausea, and pain at his stomach. Through the next two days I ordered the same quantity of the tincture to be continued in wine-whey, instead of the decoction; and that agreed very well with him. He observed of himself, that if he happened to pass the usual time of taking his cordial (as he called it), he always had more stiffness and startings. He was also gratified by the warm bath, which, though it did not sensibly abate the rigidity, never failed to give him some pleasant sensations. As he could now (the morning of the 5th) swallow a little better, I ventured to direct that three grains of powdered opium in currant-jelly should be taken with each dose of his mixture.

6th. This was the first day that gave me any good hopes. He had taken his medicine well ; had a good night ; his jaws strikingly more separate, indeed enough to admit the end of the finger. I thought his neck and belly a little softer ; and while in the bath to-day his knees bent ; and he made a small portion of thick urine. The stump looked more clean and red, and the discharge of a better consistence ; ordered the opiate to be continued as yesterday.

7th and 8th. All the favourable appearances continue. He slept so sound six or seven hours last night, that they did not disturb him, to give him his medicine ; by which he lost two or three doses ; but he does not seem to have suffered from it, appearing in all respects mended this morning ; could open his mouth still wider ; complained of being hungry, and begged some pancake to eat ; which being indulged in, he made shift to chew and swallow pretty well. On the 7th, he had some flexion in his back and hip-joints, as well as hams, and made water in a full stream in the bath ; to-day he could sit half bent, and move his legs himself ; the spine began

to resume its ordinary curvature, the belly and other shrunk parts to plump a little, and the rigidity every where to give way. The force of the disease being evidently spent, I ventured to withdraw the opium, and ordered only an ounce and a half of the tincture during the next twenty-four hours.

9th. He did not sleep so much, but was perfectly free from pain, and quite cheerful this morning; has recovered much of his natural aspect; neck softer; jaw still more flexible; craved for food, and could sit up a little in bed; perspiration much abated; and to-day, without clyster or purge, he had a natural stool, and made water freely; the stump also begins to heal; prescribed only tinct. opii unciam i. for the ensuing twenty-four hours, and that to be daily diminished; ordered the warm bath to be now used only once in the two days.

14th. Since the 9th, he has made a very good progress; the jaw every day approaching nearer to its original flexibility; the rigidity of the other parts now almost gone, and evacuations natural: but he is still so weak as to be unable to stand, or get out of bed,

without assistance ; the dose of tincture is now reduced to little more than a drachm in twenty-four hours ; the warm bath is left off ; ordered him eggs, broth, and wine.

24th. He has continued to mend to my wish ; no complaints remain, but excessive weakness ; no vestige of former rigidity ; and as he was generally disposed to sleep in the night-time, I diminished his dose of tincture gradually, till, on the 22d, he only took ten drops ; and last night left it quite off. He now eats a little meat at dinner, and takes two scruples of the bark in powder twice a-day, in a cup of milk, without inconvenience.

In the beginning of May he began to get strength apace ; had good nights, good appetite, urine and stools natural, and was able to walk half a mile daily. About the 20th, his stump was cicatrized ; he was in every respect well ; and has continued in perfect health ever since.

It is to be remarked, that this patient, though only fifteen years of age, and used to no strong liquors, took, while at the worst, within forty-eight hours, five ounces of tinc-

ture of opium, prepared according to the London Dispensatory; which, so far from producing any injurious effect, as might have been feared, procured a very sensible alleviation of all the symptoms. In the space of five weeks, the time the disease lasted, he took in all twenty-four ounces and a half of the same tincture, and near three drachms of solid opium; yet his head was so far from being affected by it, as we might have expected, that he had little or no delirium, but on the night when the dose was diminished. Moderate doses of the opiate seemed only to mitigate the symptoms, and keep them at a stand; and even ceased to have this good effect, if they were not increased daily. The total reduction of the disease was obviously owing to the dose being augmented very largely, and then continued for several days together, without intermission or abatement, together with the use of the warm bath, which evidently contributed to the cure. It is also remarkable, that notwithstanding the use of so much opium, and the long continuance of so violent and terrible a disorder, the boy's constitution is no ways impaired or

X 3

enervated,

enervated, being in all respects as strong and healthy as before the accident.

The other case which fell under my cognizance was that of a young woman, who had nearly the same train of symptoms, from a wound made by a nail passing through the whole substance of her right foot. The disease had the same sort of progress and termination ; but never arising to the same height, her foot was saved ; less opium was required ; and the whole period of the disorder was concluded in three weeks ; yet the decided efficacy of the opium and warm bath was scarcely less conspicuous in this case, than in that which I have recorded.

IX.

Account of the good Effects obtained from washing the Body with cold Water and Vinegar, in Cases of Typhus Fever attended with Petechiæ. By Dr. Robert Halls, Physician, Colchester.

DURING my residence as a student at Edinburgh, I had an opportunity of seeing several cases of petechial typhus treated under the direction of Dr. Gregory by the external application of cold water. The success attending the practice made me resolve at that time to adopt it whenever I should have an opportunity. For such an opportunity I am obliged to Mr. Hutcheson, surgeon to the Surry Fencibles, who permitted me to attend his hospital in Colchester, in which a very malignant fever prevailed for two or three months during the spring of the present year. For some time previous to the appearance of the fever, the small-pox had been very com-

mon, and proved more fatal than I had ever known it; a few soldiers had died of it in the hospital, owing principally, I believe, to the obstinacy with which they persisted in the use of strong liquors, and to the heat of the atmosphere, in which, notwithstanding every effort of the surgeon, they were kept. It is probable that these deaths, by dispiriting such patients as were seized with typhus, rendered the effects of the fever more violent.

It would be needless for me to recount the symptoms of typhus. The cases which I saw were not in any respect singular; except that, like those of Edinburgh, in the year 1793, they began with catarrhal symptoms, accompanied with acute pain in the side, occasionally so violent as to call for repeated blisters; which generally afforded relief, and promoted the expectoration in almost every case extremely copious. Petechiæ were observed very early in the disease; numerous, of a dark colour, and extended over the whole body. Several of the patients assured me, and I certainly did not attempt to undeceive them, that "it was nothing but the itch." The pulse, in two or three instances, where the
pneumonic

pneumonic symptoms were most violent, was, during the first three or four days, strong and bounding, notwithstanding the petechiæ were at the same time very copious. It generally, however, sank quickly.

There were some trifling varieties in different cases, but I do not think it important to notice them.

In *all*, I prescribed the washing of the whole body with cold vinegar and water twice a-day; and never without marked advantage; in some instances *more*, in others *less* permanent. At first, where the pain in the side and other catarrhal symptoms were urgent, I directed, with hesitation, the use of the cold water. As the fever, however, on the whole, appeared, the disease from which most was to be apprehended, I thought myself authorised in making the experiment; and I had very soon the most complete conviction, that I had nothing to fear. The pain in the side, cough, &c. far from being aggravated, were in every case relieved.

The effects which I more particularly observed, as ensuing from this application, were the following.

The number and livid appearance of the
petechiæ

petechiæ were universally lessened. The pulse, when weak and frequent, became slower and stronger; the skin moist and soft. The head was more free from delirium. Sleep was procured. The appetite often returned; and, in some cases, thirst was produced. It may appear singular, that I should mention the production of thirst, as among the favourable effects of this remedy. I conceive it to have arisen from the diminution of the delirium, which rendered the patients sensible of thirst; to which previously, notwithstanding the very hard and parched state of the tongue, they had been altogether insensible.

Of all the cases treated in the above manner (not less, I believe, than twenty), I did not lose one; nor do I recollect any instance of a relapse. The termination of the fever was marked by no evident crisis. No medicines were given, except an occasional opiate with æther, or a laxative injection, as circumstances appeared to point out the use of the one or other.

The catarrhal affection I found aggravated by the bark, in the first case in which I ordered

dered it. I had therefore afterwards no recourse to it. Wine, however, was taken with great apparent advantage, and the liberality of Mr. Hutcheson supplied it to the utmost extent of my wishes.

Permit me, Sir, before I close this letter, to enter somewhat more at large into the history of one of the above cases, attended with two or three peculiarities that distinguished it from the rest.

The subject of it, a man about forty, had for several months been so deaf, that the most violent sounds made no impression on his auditory nerves. I was unable to learn the cause of this complaint. In other respects he was in good health. At the first attack of his fever, the catarrhal symptoms were unusually violent. When I saw him, about the fifth day, his expectoration, which had been in large quantity, was suppressed; his body covered with numerous petechiæ of a dark colour; he lay entirely naked, rolling from one side of his bed to the other without ceasing. His delirium appeared from circumstances of the most furious kind. He was unable either to speak or swallow, from a
spastic

spastic contraction of the muscles of the jaw, and neighbouring parts. His arms were violently convulsed ; and his eyes of the brightest red. He did not appear to suffer inconvenience from the light of the sun ; which shone full upon him ; but it was evident that the least noise was painful to him. The pulse was weak, frequent, and irregular.

I ordered the immediate application of the cold vinegar and water ; and promised to call again in the evening. It was now noon. At my return, I found him in the same state of furious delirium ; but I learned, that, during the application of the vinegar and water, the spasm of the jaw had yielded, and that he had spoken to the person who was washing him. The pulse was much more calm, and the skin moist. I directed the repetition of the *lavatio frigida*.

Early in the morning, when I called, my patient was perfectly composed. His pulse was regular and much stronger. He conversed with ease ; heard distinctly, and without pain ; and expressed a wish for something to eat. A blister, I was informed, had the preceding evening been applied to the head,

head, by direction of the surgeon ; and I was at a loss to determine, whether I ought to attribute the amendment to this, or to the cold washing. On examining the head, however, all doubt was removed ; as I found that the blister, by the negligence of the attendant, had been applied, without the head having been previously shaved.

The event of this case I was prevented from learning ; but I have every reason to believe, that the man recovered perfectly. I think it proper to add, that the bright redness of the eyes was not, as I at first supposed it, connected with the fever.

X.

A Case of Congenite Hernia, for which the Operation was performed above the Pubes, with success. By Mr. Thomas Wilson, Surgeon at Louth in Lincolnshire.

I WAS called, on the 14th of July 1792, to Mr. Thomas Hudson of Louth, a young man aged 18. He was at that time ten miles from home. Being myself engaged, I sent my assistant, who found him complaining of great pain in his body, with vomiting and constipation. Supposing his disorder to be the colic, he took away some blood, applied warm fomentations to the abdomen, and endeavoured, by clysters and opening medicines, to procure an evacuation from the bowels. I saw him on the 15th, at Mr. Hudson's of Kenwicke Thorpe, about two miles from Louth, to which place he had been removed. His complaints were not relieved by the measures which had been used. He had

had a constant pain in the abdomen, chiefly about the umbilicus, with frequent vomiting; and no stools had been procured. On inquiry, if he had ever had an hernia, he said he had not. But, on examining his body, I perceived a tumour of the size of a pigeon's egg, about an inch and a half or two inches above the ring where the spermatic vessels pass from the cavity of the abdomen. I likewise observed, that there was only one testicle in the scrotum. I had no doubt that the tumour was a ventral hernia; and I supposed a portion of the intangled intestine to be the cause of all his complaints. The more particular account he gave of himself was, that he had never observed more than one testicle in the scrotum, the right one lying and being always felt above the pubes. He first perceived a swelling on the right side of his body, about 18 months previous to the attack. At first, it pained him now and then, for half an hour perhaps at a time, and the tumour disappeared when he became easy. He was subject to attacks of pain, like that of colic, once in three or four months; but was always able to go about his business, which

which was that of a butcher. In this occupation he had frequent occasions to carry large loads of meat on horseback. About nine months ago, as he was carrying a load of meat, it broke loose, and threw him upon the pommel of the saddle, which gave him great pain in the right testicle for an hour or two ; and since that time, the tumour increased faster in size, and his returns of pain were more frequent, and more lasting.

I used every endeavour in the usual way to reduce the hernia, but without effect ; I afterwards took away more blood ; ordered a stimulating clyster, and directed thick cloths, wet with a solution of sal amoniac, in vinegar and water, to be applied cold, and to be kept constantly on the part.

On the 16th, Mr. Pettener, an eminent surgeon at Louth, on whose experience and judgment I could safely rely, was desired to attend along with me. We concurred unanimously in the measures to be pursued ; we took away blood, as the symptoms, which were in general rather moderate than violent, seemed to require ; we gave various opening medicines, and threw up repeatedly both
acrid

acrid clysters and the infusion of tobacco. The cold solution was constantly applied to the part ; and, as we judged it expedient, we attempted now and then cautiously to return the protruded part.

On the 18th, when every mean had been tried to no purpose, the warm bath having been also made use of, we thought it not safe any longer to defer the operation ; I therefore made an incision, about four inches long, in the course of the tumour, endeavouring as much as possible to avoid the larger branches of the epigastric artery. It was found necessary to continue the incision to within half an inch of the os pubis. When the common integuments were cut through, we discovered the sac protruding through the separated fibres of the abdominal muscles ; and on dissecting away the adjoining parts, and laying the whole sac bare, it appeared to be about the size of a turkey's egg, and had a livid appearance. On opening the sac, a spoonful or two of discoloured fluid was discharged ; and we then observed a small portion of intestine, about the size of a walnut, entangled, and firmly embraced by the parts through which it had

passed. We also found the right testicle contained in the sac. Having agreed with Mr. Pettener upon the measures to be pursued, I carefully removed the stricture with a blunt-pointed bistoury, introduced on the point of my finger, and returned the intestine. The testicle was passed through the same opening; and the wound being dressed in the usual way, the external parts were united by the interrupted suture, and the whole secured with a proper bandage. In about two hours after the operation, he began to have copious evacuations by stool, which gave him great relief. Every symptom was favourable; and he continued for about a week to recover to our wishes; but at this time he complained of a tightness and foreness of his body, with a pain of the parts near the incision; he was restless, hot, and feverish. On removing the dressings, and examining the state of the wound and neighbouring parts, with great care and attention, I discovered that an adhesion of parts near to one of the futures had confined some pus, which had formed near it; and, on separating this adhesion, the purulent matter was discharged, and he was instantly
I relieved,

relieved. From this time he recovered without one unfavourable symptom ; and has ever since remained perfectly well, and free from any inconvenience from the operation. The wound healed with a very firm cicatrix ; he wore a defensive bandage for some time after the operation, but has long since discontinued its use ; and still follows his usual occupation, in which he has frequent occasion to use great muscular exertion.

XI.

Two Cases of obstinate Constipation of the Bowels, arising from an accumulation of Faeces in the Rectum, attended with Colic Pains, cured chiefly by Manual Operation. By Mr. Robert Bishoprick, Surgeon, York.

ABOUT the year 1775, Mrs. H——, a tradesman's wife of this city, aged forty-five, in a very infirm state of health, and of a delicate and costive habit of body, was seized with a most obstinate constipation of the bowels, which after some days was attended with colic pains, which, gradually increasing, continued until she had been eighteen days without a stool. During this period she was attended by a very eminent physician, who had prescribed a variety of opening medicines and clysters, without effect. She had taken very little food all the time, and became so much exhausted, that the physician at last gave up his attendance, considering her

as a lost case ; and her husband had for several nights together taken his leave of her, not expecting to find her alive in the morning.

It was at this period that I was called in by the friends of the patient, from its having been suggested to them, that the obstruction of the bowels might possibly be owing to inward piles ; a circumstance they wished to have ascertained by an examination. On visiting the patient, I found her in the state already described, nearly exhausted, with a small quick pulse, and her voice so weak and depressed, that she could scarcely be heard to speak in a whisper. In answer to the few questions I put to her, she gave me to understand, that, independent of the colic-pains, which were better and worse by paroxysms, she had a constant sensation of a fullness and a weight at the lower part of her body, extending towards the fundament. Agreeable to the purpose of my visit, I slowly and gently examined the rectum with my forefinger, and found no hæmorrhoidal tumours ; but, at the distance of between two and three three inches up the gut, I felt a large ball, or mass of hardened fœces ; I therefore resolved

to try how far I could break and divide this mass; and if I could bring part of it away with my finger, I flattered myself that the remainder might be so far broken and loosened by the operation, as to be easily discharged by the assistance of an injection. Accordingly, in the space of about an hour and a half, at three operations of about five or six minutes each, for the patient's extreme debility would not permit the operation to be done all at once, I brought away a considerable number of scybala, or knotted fæces, of various sizes. In the intervals of the operation, I endeavoured to support my patient, by giving her now and then a little mulled wine. Having thus prepared her for the admission of an opening clyster, I ordered one, to be composed of two tea-spoonfuls of common salt and two table-spoonfuls of coarse sugar, dissolved in half a pint of milk, and four table-spoonfuls of oil of olives. This being injected, soon brought away the remainder of the mass, which altogether, I believe, would have weighed about half a pound. The subsequent stools came away without any further medical assistance; and the patient from this
time,

time, by the aid of good nursing, and nourishing diet alone, gradually and progressively recovered, and lived about ten years after.

About the same time that the case of Mrs. H—— occurred, I attended another tradesman's wife of this city, a Mrs. O——, aged twenty-eight, during her lying-in. Her labour was natural; and the only circumstance deserving notice, was that of her being very costive. Soon after her delivery she was seized with colic-pains, for which I prescribed aperient medicines and clysters in the usual manner, but totally without effect, no stool being procured. At the end of six days from the delivery, the case becoming very seriously alarming, from the obstinate continuance of the obstruction, and increase of colic-pains, I was induced to examine the rectum with my finger, in order to ascertain whether the lower part of the gut might not be the seat of the disorder. Upon examination, I found the cause of obstruction to be perfectly the same as in the case of Mrs. H——. Accordingly I immediately set about using the same means; and by manual operation, and the injection of an aperient clyster perfectly similar to that already described, the

hardened fæces obstructing the gut were entirely evacuated ; and from that time, by the assistance of good nursing alone, she speedily and progressively recovered from her lying-in.

OBSERVATIONS.

As the colic is one of the most painful diseases with which mankind are afflicted, I beg leave to suggest a few practical remarks upon the preceding cases.

The complaint of Mrs. H—— was remarkable for its long continuance, and that so forlorn a case should be so speedily cured. The long continuance of it may be accounted for, from the constipation having existed for several days before the colic-pains came on ; and from the pains being less violent than usual, which probably arose from a flatulent distention, rather than from acrimony. The speedy cure was evidently the effect of the successful manual operations, although the vital powers were so much exhausted.

In the case of Mrs. O——, the colic-symptoms were more acute, as might reasonably be

be expected from the greater irritability of the system, in a lying-in woman. It is true she was not so much exhausted as Mrs. H——, yet from the more rapid progress of the symptoms, had the manual operation been delayed any longer, there was the greatest reason to believe she would soon have expired.

From a due consideration, therefore, of these cases, and others which I have met with in the course of my long practice, I cannot forbear strongly recommending it to the Faculty, in all cases of colic in which the usual means of aperient medicines and clysters have had a reasonable trial, and have failed, to have the rectum examined by the finger, in order to ascertain whether an accumulation of hardened fæces in the gut may not be the immediate cause of the malady. No reasonable objection can possibly be made to this measure, because the operation may be so easily performed by every practitioner, and with so little trouble to the patient ; and if but one life in ten or twenty should be saved by this precaution, it is certainly worthy of attention.

The propriety of the examination here recommended,

commended, I apprehend, will be still further confirmed by the following observations. It is well known, that child-bearing women are extremely liable to a very troublesome degree of costiveness, from the bulk of the fœtus, deranging and compressing the intestines during the latter months of pregnancy, by which a morbid dilatation of the rectum occasionally takes place, which is obvious from such patients sometimes parting with costive stools of an extraordinary size and diameter. It has been observed likewise, from anatomical examinations, that the rectum of some subjects a little above the anus has been found enlarged in an extraordinary manner, into a kind of pouch, as if intended by Nature for a temporary receptacle of fæces.

Now, such an enlargement as is here mentioned evidently took place in the case of Mrs. H——, because the ball of fæcal matter amounted to about half a pound weight; and I believe in her it was chiefly by a natural enlargement, for she was not a child-bearing woman. But the dilatation of the gut, in the case of Mrs. O——, I am more inclined to consider as a morbid enlargement of its capacity

city, from great occasional costiveness brought on by frequent pregnancy, for she was the mother of many children. But whether the enlargement or dilatation which has been described be natural or artificial, it will always operate as a predisposing cause to a dangerous accumulation of hardened fæces in the rectum; and therefore, wherever such a cause is known to exist, it ought more particularly to attract the attention of the practitioner, in the treatment of the colic. At the same time as a morbid accumulation of the fæces is known to take place, without any obvious predisposing cause, the possibility of such an accumulation being present in the rectum in every case of real colic, attended with a costive state of the body, ought never to be lost sight of in the history and treatment of so painful and dangerous a disease.

S E C T.

SECT. III.

MEDICAL NEWS.

THE pestilential fever which raged with so great fatality, at Grenada and Philadelphia, has also produced many deaths in other West India islands, particularly in Jamaica, where it has been the subject of very keen newspaper-controversies among the medical practitioners. The following article of intelligence respecting it has been communicated to Dr. Duncan by an ingenious correspondent in that island.

“ Much, I doubt not, will have come to your hands, respecting our yellow fever, and
its

its treatment by calomel. There is no doubt that the use of this medicine has been successful, when every thing else has been abandoned. But we still lament the numerous fatal cases, in which it manifests no influence whatever; and what may appear peculiar is, that although the alimentary canal be capable of being affected by purgatives, through every stage of the disease, and even in the most hopeless cases, yet two, three, or even four hundred grains of calomel, taken in doses of five grains every hour, have produced no apparent effect; and when given in a loose state, with honey, it has been returned, after many hours continuance in the stomach, to every observation unchanged.

In cases where the black vomit has been of some continuance, and where the discharge is a coagulated matter exactly resembling the grounds of coffee, the gall bladder, and biliary ducts, have on dissection been found loaded with the same substance. In all cases where mercury has made its effect permanent on the mouth and salivary glands, the cure has been certain. And so much have our habits of practice leaned to suspicion, since the
disease

disease made its appearance among us, that it is common, where the remittent degenerates into the continued fever, to give calomel with good effect. In no one instance, within my knowledge, has any old inhabitant been attacked with the prevailing epidemic.

As the calomel has so little influence on the stomach and intestines, I have lately tried both frictions with strong mercurial ointment and a solution of corrosive sublimate in the way of clyster; but I am yet unable to say any thing decided respecting these practices."

Another correspondent from Montego bay, in Jamaica, writes as follows.

" This bay is reckoned remarkably healthy, and it is supposed, that the malignant fever was not so fatal here as in other parts of the island. The bay contains from five to six hundred white inhabitants, and as many people of colour, not one of whom died of the fever. It was almost entirely confined to sailors, and to new comers. Of the new comers, who arrived here, twelve or fourteen died. The number of sailors who died could not be rightly ascertained, as there was no regular

gular record kept of their deaths. Neither could we ascertain the number of new comers who died on different neighbouring estates. It is supposed the fever proved more fatal in Trelawny, the neighbouring parish; on one estate, in particular, six whites died in the course of one week. Among the shipping also, a greater number died than in our harbour. Even among us, however, we felt too much of its fatality.

“The chief and only characteristic symptoms distinguishing this fever from our bilious remittent, were the immediate and sudden determination to the head, inflamed eyes, flushed countenance, a full, quick, and hard pulse, oppression about the præcordia, vast anxiety, attended with great irritability of the stomach, frequent vomitings of a bilious matter, and towards the end, of a dark, porraceous matter, resembling the grounds of coffee. The patient was generally seized with delirium, singultus, and all the other symptoms attendant on a putrid disease; some became comatose, which frequently ended the scene in less than forty-eight hours.

“Practitioners differed much with respect
to

to the treatment of this disease, which produced much dissention among the medical gentlemen in Kingston, and was the cause of a newspaper-dispute, from which very little knowledge was derived, for the benefit of society, or the good of the poor sufferers. Some contended that there were two kinds of fever prevalent in the island, the one highly inflammatory, the other highly putrid. This, however, seemed to be merely hypothetical. From what we saw, the inflammatory frequently degenerated into the putrid, and all the cases nearly corresponded in their symptoms. Some practitioners succeeded in the cure by the use of the lancet, while others again denied its use altogether, and placed their whole hopes of cure on calomel. How this mode of treatment really succeeded, I cannot pretend to say, as it was but little followed in this part of the island. But I can truly assert, that blood-letting, on the first appearance of the symptoms, certainly did good, and relieved the patient, especially if followed immediately by other proper evacuates. The early administration of the Peruvian bark, after
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the patient had been properly evacuated, was also of great service. When the stomach became so irritable as not to retain the Peruvian bark, it was generally found beneficial when given by way of injection. Where bleeding was delayed for any time after the first appearance, it frequently did more harm than good. But such was the prejudice in favour of blood-letting, that the practitioner was often blamed, if he did not act according to the rules of fashion. This was the mode of practice followed by most of the medical practitioners here; and I flatter myself frequently with great benefit; although it must be allowed, that many cases baffled every effort of the practitioner."

* * * *

Dr. Duncan has been favoured by a third correspondent, in Jamaica, with a remarkable history of a particular case of this fever, which will probably be published in the next volume of Commentaries. In that case, the patient, within the space of a few days, had taken 270 grains of calomel, and had rubbed in twenty

drachms of the strongest mercurial ointment, from which the happiest effects were produced.

* * * *

AN ingenious gentleman, Mr. Smith, who was engaged last winter in the study of medicine at London, made, we are informed, several curious experiments, tending to prove, that different substances, introduced into the cavity of the abdomen, are dissolved there as well as in the stomach.

According to the account sent to us, this subject suggested itself to Mr. Smith, when making experiments on extra-uterine gestation. He had introduced three ova and two fetuses of mice into the abdomen of a cat, to see whether they would adhere and live; but the animal died in sixteen hours, and, on examination, only about the size of a pin's head of one of the thigh-bones could be found. He then introduced pieces of flesh, liver, &c. into the abdomen of different cats, and found them constantly absorbed, excepting small parts of the bones, which were always much corroded.

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To prove that previous to absorption they had been dissolved by a fluid, he inclosed the limbs of a frog in a linen bag, and in sixty hours, on the bag being opened, it was found to contain only a very small portion of bone. When pieces of beef, and the limbs of frogs, were introduced under the skin in contact with the muscles, they were dissolved, and formed a tumour filled with healthy-like pus.

From these circumstances, he is led to draw the conclusion, that the abdomen and the muscles, when irritated and exposed, have the power of secreting a fluid capable of dissolving animal substances; but with this difference, that the natural cavities have the power of absorption superadded.

We would fain hope, that the singular phenomena, which have been exhibited in Mr. Smith's investigations, will lead him to prosecute the subject; and that he will present to the public a full detail of his observations, as well as of the conclusions which he is disposed to draw from them.

* * * *

DR. STEVENSON physician in Arbroath, in a letter to Sir Alexander Douglas physician in Dundee, which has been communicated to Dr. Duncan, gives the following account of singular benefit obtained from *Digitalis purpurea*, in a case of dropsy.

“ Perhaps I should have acquainted you before this, of the state of our patient Captain B—’s health ; but as matters remained with little alteration for some time after you left this, and as afterwards the event became every day more and more doubtful, I determined to postpone troubling you till I could write somewhat decisively.

“ In no case whatever, which has fallen under my observation, have the diuretic powers of the *Digitalis purpurea* appeared more remarkable than in this.

You will probably recollect, that we determined to begin with small doses of the powdered leaves. Accordingly I tried one grain at bed-time every other night ; but this produced

duced tormina and vertigo to such a degree, that I desisted from any farther attempts for three or four days. I then ventured to give him, every night at bed-time, half a grain of the *Digitalis*, together with a grain of opium, an article to which he had been accustomed. This was found to sit easy upon the stomach, and, in some degree, to obviate the almost intolerable dyspnœa and anxiety, to which he was at that time subjected.

By gradually increasing the dose, I was able in a fortnight to give him two grains daily, one at night, and another in the morning. A saturated solution of cream of tartar was taken as common drink. About this time, however, his leg began to be anasarcaous; and soon after the swelling extended, considerably above the knee. The skin was so much stretched, that nothing deterred me from puncturing them, but a degree of extravasation which had taken place in the form of purple spots, and made me dread a consequent sphacelus. Giving the *Digitalis* a farther trial, seemed to be the last resource. In a few days, therefore, I brought the dose to two grains in the morning, and two at night,

laying aside every other medicine. His urine, you know, was at first very scanty, and deposited a copious lateritious sediment. His pulse was from 110 to 120 in the minute, with some creeping interrupted irregularity, and was at the same time very compressible.

It did not appear to me, that any considerable mitigation of his very distressing and unfavourable symptoms took place till the *Digitalis* was given to the quantity of four grains daily. Then, however, the urine began to flow most copiously, and to put on the natural appearance; the pulse to lose much of its quickness, and somewhat of its irregularity; the anasarca, the dyspnœa, and every appearance of hydrothorax, gradually to diminish. According to the strictest observation, the quantity of urine, for the space of some weeks, exceeded that of every description of fluid swallowed in the proportion of about three to one.

When the *Digitalis* was pushed beyond four grains, it always produced something disagreeable about the head, such as vertigo tumitus aurium. I have now the satisfaction to inform you, that he is riding out every day

day on horseback, his appetite good, his strength rapidly increasing, and the oppression of his lungs completely removed.

* * * *

MR. BISHOPRICK of York, in a letter to Dr. Duncan, gives the following account of a medicine which he has found highly efficacious in cases of uterine hæmorrhagy.

I have had considerable experience and success in the practice of midwifery in this city and its neighbourhood for more than forty years; and having in that time met with many very troublesome, and some very dangerous, cases of uterine hæmorrhagy, I beg leave, through your useful repository, to communicate to the public, for the benefit of mankind, a medicine which I have found of great efficacy in relieving such cases. This consideration, I flatter myself, will render it not unworthy of attention, especially as the health of that class of patients, who are the subject of this complaint, is of the utmost
Z 4. consequence

consequence to the happiness and welfare of both themselves and families.

COMPOUND VITRIOLIC TINCTURE.

Take of burnt vitriolated copper, commonly called blue vitriol, eight ounces, of dragon's blood two ounces, of rectified spirit of wine two pints.

Let the ingredients, reduced to powder, and put into a matrafs containing the spirit, be digested in a sand-heat for four days, shaking up the vessel three or four times a-day, and then let the tincture be decanted off clear for use.

The burnt vitriolated copper is prepared in the same manner as the burnt alum, according to the directions of the College of Edinburgh, in their Pharmacopœia, by the putting the ingredients into a crucible, and suffering it to remain upon the fire until it ceases to bubble.

This preparation first came into my hands as a nostrum; and finding it upon trial to afford relief beyond my expectation, I have never ventured to make any alteration on it,

otherwise I am of opinion, that the proportion of blue vitriol is much larger than necessary; but as I apprehend that the menstruum can only dissolve a certain portion of the ingredients in order to be fully saturated, I believe, provided the spirit of wine be of the proper strength, that the medicine will always be uniformly the same; and therefore, any trifling waste of ingredients can be of no consequence. With respect, however, to the dragon's blood, if the gum kino were substituted in its stead, it would be an improvement similar to that which was made by the Edinburgh College, when they reformed the prescription for the styptic powder, now called the Compound Powder of Alum.

My usual mode of administering the tincture was by giving from forty to sixty drops in an ounce of red-port wine mixed with an ounce of water three or four times a-day. The doses have sometimes been enlarged, although not often, but generally without any inconvenience. The tincture, in some cases, may likewise be given with propriety, in draughts coinciding with the general intention. In these, the principal ingredient may
be

be either nitre, neutralised salt of wormwood, or the Peruvian bark, at the discretion of the practitioner.

Patients with delicate stomachs will sometimes, though rarely, be affected with a slight degree of nausea from the use of the tincture. In such cases, it will be advisable to omit five or ten drops, more or less, of the former dose, until the medicine shall sit easily upon the stomach. I know of no other operative effect, except that it sometimes proves rather astringent.

In cases of considerable uterine discharges continuing after natural labours or miscarriages, likewise in cases of menorrhagia, or the overflowing of the menses in non-pregnant women, I have experienced the most extraordinary good effects from the administration of this medicine. Some good effects have generally been perceptible in the course of a few days ; and I have met with very few cases which were not materially relieved by it, of which a considerable number have been perfectly cured. Indeed, my reliance on the efficacy of the medicine has been such, that for more than thirty years past I have very
feldom

feldom given it in any other vehicle than a little red port and water, or with any other medicine, coinciding with the same intention during its use.

* * * *

DR. PATERSON, physician at Londonderry, has circulated among his friends the following account of an undertaking of his respecting meteorological observations.

METEOROLOGY.

Different opinions have long been entertained, and are still held, respecting the influence of the air upon the human body, as well in producing as in promoting health and disease. That a material connection exists between these states of our frame and the element in which we live, move, and have our being, is incontrovertibly proved by observation and experience. Could we trace this connection, and obtain even a tolerable notion of its laws, what a delightful prospect would it open to our view, and how valuable an acquisition would it be for medicine and for mankind !

If

If ever there was a time to attempt such a research, this is the conjuncture: Now, when chemistry has unfolded the nature of aerial fluids; when these fluids are already applied to medical purposes; when the constitution of the atmosphere is diligently explored; when the arts teem with suitable instruments; and when a more pure and rational philosophy is known in the world.

Encouraged by these favourable circumstances, Dr. Paterfon has ventured to undertake, and has at present in considerable forwardness, a work which he intends to publish, under the title of *Specimens of Philosophical, Mechanical, and Medical Inquiry*, designed for the purpose of tracing the relation of meteorology to medicine.

This work, which comprehends several correlative topics, must consequently embrace a variety of matter; and therefore the exertions of an individual, be they ever so strenuous, cannot render it as useful, and deserving public notice, as they might do by the help of enlarged correspondence. Not only the philosopher, the physician, and the artist, but the private gentleman and the farmer,
nay,

may, even the plainest observer, may contribute useful information on the subject.

The principal points demanding attention are, the topography of the place where the observations are made, the direction and force of the winds, the quantity of rain, and number of rainy days, the degree and frequency of hail, snow, frost, aurora borealis and australis, lunar halo, and thunder and lightning, the appearance of clouds, the eudiometrical condition of the air, and the ranges of the barometer, thermometer, and hygrometer. These are the general objects. The particular ones are, in the province of the physician, the state of diseases, especially epidemics; and in that of the farmer, the progress of vegetation. In the course of observation in so extensive a field, other things may occur, which might likewise be turned to advantage; and which, with intelligence on the above heads, or on as many of them as can be noted, will be thankfully received.

Communications may be sent, directed to Mr. J. Johnson, bookseller, St. Paul's Churchyard, London; to Mess. Bell and Bradfute, booksellers, Edinburgh; to Mr. W. Gilbert, bookseller,

bookfeller, Dublin; to Mr. W. Chamberlaine, surgeon, Aylesbury-street, London; or to the author, at Londonderry.

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IN our last volume we gave some account of a proposal for establishing an institution for ascertaining the effects of elastic fluids in various diseases, and for discovering the best method of procuring and applying them. We are happy to say, that the design, though but lately proposed, has found many respectable supporters, both among the most distinguished of the nobility, and the most eminent of the medical practitioners.

The following advertisement, which has lately appeared, will convey to our readers some farther idea of the nature of this institution, than the article contained in our last volume.

MEDICAL PNEUMATIC INSTITUTION.

From various trials of the inhalation and external application of factitious airs in the Bath and Manchester Hospitals, as well as in
private

private practice, there is good reason to believe, that they will prove efficacious in many disorders which have hitherto appeared irremediable, particularly in cancer and other malignant ulcers, in palsy, and in consumption. In order to discover the best mode of application of these substances, many eminent physicians and philosophers have approved of the formation of a temporary institution, where rooms may be filled with air properly modified; which will probably be necessary to a complete trial of this practice in some diseases, where experiments may be commodiously made on the diseases of animals, and where long continued processes of investigation can be carried on for the purpose of useful discoveries.

This treatment has been imperfectly applied to many patients; and, according to the testimonies of Dr. Beddoes, Dr. Ewart, Dr. Thornton, the Rev. Joseph Townshend, the Manchester practitioners, and others, with unexpected success, so much has been clearly evinced, that it is perfectly safe, where the caution at all times necessary in the practice of physic is employed. It is moreover

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capable of almost infinite variation and improvement. And when men of science are assured their suggestion will be carried into effect, as in the establishment proposed, they will be likely to exert their inventive powers in behalf of humanity. The institution will be conducted in the most open manner possible, and accounts of its progress regularly published.

Subscriptions for this institution are received by eminent bankers and bookfellers in different large towns, particularly by Mr. Thomas Coutts and Co. bankers in the Strand, London, and by Mess. Bell and Bradfute, bookfellers, Edinburgh.

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DR. THOMAS GARNET, lately physician at Harrogate, already well known to the medical world by several ingenious publications, has communicated, in a letter to Dr. Duncan, the following account of good effects obtained from the sulphurated vegetable alkali, or liver of sulphur, as it has commonly been called, and powder of charcoal.

I intended to have sent you by Mr. Birkbeck a few cases of florid consumption, in which I have succeeded by the kali sulphuratum and powder of charcoal. But I am under the necessity of delaying it till some future opportunity. In the mean time, I shall give you a short account of this practice.

About half a drachm of each of the articles I have mentioned, mixed together, is taken four or five times a-day, in a little warm water. Though the expectoration be thick and dry, and the breathing difficult, in a few days the expectoration becomes more free, the breathing much better, and the florid colour soon leaves the face.

I imagine that the kali sulphuratum, on its solution in water, generates a very large quantity of sulphurated hydrogen gas; much of which is dissolved by the chyle, and carried into the blood, where the hydrogen unites with the oxygen, and forms water. Thus it diminishes the quantity of oxygen in the blood, perhaps more powerfully than the inhalation of airs, as proposed by Dr. Beddoes. It is certainly a much more convenient mode of obtaining this effect. If a piece of paper

on which characters have been written with a solution of the cerussa acetata, be dipt in the urine of patients who have taken the kali sulphuratum for a day or two, the characters are turned nearly as black as when such a paper has been immerfed in the sulphur-water of Harrogate. This is almost a certain proof that the sulphurated hydrogen is taken into the blood. I do not know that the powder of charcoal adds much to the efficacy of this medicine, as I apprehend that it cannot be taken into the blood; but I imagine that it may diminish the quantity of oxygen, which the vegetables, and other food which we take into the stomach, contain; and thus not only diminish the quantity of that principle taken into the system, but assist also the sulphurated hydrogen. I am of opinion, from what I have seen, that this remedy, if taken in considerable quantity, would so far diminish the proportion of oxygen in the blood, as to produce real sea-scurvy.

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MR. P. NURSEY, at present engaged in the
study

study of medicine at Edinburgh, has communicated to Dr. Duncan the following extract of a letter from a friend of his, a surgeon in the county of Suffolk, giving an account of an ingenious contrivance for fractures.

“ You may recollect my mentioning to you an ingenious fracture-box. It has now received a full trial. By this superlative effort of genius, a person with a fractured leg is enabled, the day after the accident, to rise from his bed, and sit at table with his family at dinner. His leg is bound up with the greatest expedition and ease ; and those who have suffered pain even to delirium with bad fractures, have found very considerable relief soon after the application of the apparatus.

“ When it is properly fixed on the leg, the patient may turn himself in bed, from one side to the other, in any position, without the least inconvenience or disturbance to the diseased part ; and he is even able to get out of bed with the assistance of one person. I wish it were in my power to give you an idea of its mechanism ; but description lags behind, even in its utility, much more in its exten-

five motion, adapting itself to every possible position of the body. Its construction, notwithstanding this, is truly simple. It is made by Jacob Stanton of Weybread in Suffolk. It needs only to be known, to be universally adopted; and what I have said is only from a strong conviction of its utility.”

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IN our volume of Commentaries for 1793, we inserted an advertisement from the Royal Medical Society of Edinburgh, respecting a prize-question on the subject of animal electricity. In consequence of that advertisement, an essay was transmitted to their secretary, which, in the opinion of the committee appointed to decide on the merits of the respective dissertations, displayed great ingenuity; but they did not consider it as entitled to the prize, as the author attempted to answer the first only of the queries proposed. The Society have therefore renewed their offer of a prize of twenty-five guineas for the best experimental essay on the same four queries which were inserted in our former volume;

lume; and the same committee, whose names we formerly mentioned, Drs. Adair, Black, &c. are appointed to examine the essays, and to adjudge the prize to that which they shall deem most deserving. Other essays, on application being made to the secretary, will be returned as directed, with the letters accompanying them unopened.

Essays may be written in English, French, or Latin, and must be transmitted to the secretary of the society before the 1st of September 1796. Each essay must be accompanied by a sealed letter, containing the motto prefixed to the essay, and the name and abode of the author.

* * * *

WE have frequently had occasion to mention the plan adopted by the Harveian Society of Edinburgh, for encouraging experimental inquiry among the students of medicine, by proposing prize-questions. For some years past, in consequence of particular circumstances, this plan has been interrupted. The society, however, have again resolved to

refume it, by propofing the five following questions for five fucceffive years.

For 1796, an experimental inquiry, demonftrating the effects produced on the human body, in a ftate of health, by the cold bath, where the heat of the water is below feventy degrees ; the difeafes in which it may be employed with advantage ; and the bad confequences which are to be dreaded from it in certain affections.

For 1797, an experimental inquiry, demonftrating the effects produced in the human body, in a ftate of health, by the tepid bath, where the heat of the water is from feventy to ninety degrees in Farenheit's thermometer ; the difeafes in which it may be employed with advantage ; and the bad confequences which are to be dreaded from it in certain ftates of the fystem.

For 1798, an experimental inquiry, demonftrating the effects produced on the human body, in a ftate of health, by the hot bath, where the heat of the water is above ninety-fix degrees in Farenheit's thermometer ; the difeafes in which it may be employed with advantage ; and the bad confequences which

are to be dreaded from it in certain states of the system.

For 1799, an experimental inquiry, demonstrating the effects produced on the human body, in a state of health, by the vapour bath, and its influence in removing or increasing diseases.

For 1800, an experimental inquiry, demonstrating the effects produced on the human body, in a state of health, by the medicated vapour bath, and its influence in removing or increasing diseases.

Dissertations on these subjects must be transmitted to Dr. Duncan, physician, or to Mr. John Bell, surgeon in Edinburgh, secretaries to the society, on or before the 31st day of December of the year for which the question is proposed. Each dissertation must be accompanied with a sealed letter, containing the name and address of the author, and marked on the back with any particular motto, which must also be prefixed to the dissertations to which it belongs.

The only prize to be given by the society to the successful candidate, is a copy of the quarto edition of Dr. Harvey's Works, pub-

lished by the College of Physicians of London. But he is left at full liberty to employ his dissertation afterward in any way he may think proper. And accordingly different dissertations presented to the Harveian Society have, in consequence of publication, been productive both of considerable honour and emolument to the authors.

On the first subject proposed, the effects of cold bathing, the society expect that candidates should endeavour to ascertain the influence of partial as well as of general cold bathing ; the differences in the effects from bathing in fresh water and in sea-water, if any such differences really do exist ; the varieties in the effects produced from different modes of cold bathing, as the shower bath, sudden and total immersion, mere washing of the body, and the like ; and the varieties in the effects produced from the length of time, for which cold bathing under any form is continued. They will also, with pleasure, attend to any collateral inquiries which the experiments performed by candidates may suggest to them in the course of their investigations.

ACCOUNT

Some encouragement may perhaps be afforded to future competitors, from the following account of the subjects formerly proposed by the Harveian Society, with a list of the successful candidates. Those to which the letter P. is subjoined have been published since the prize was adjudged to them.

An experimental essay on the best criterion for distinguishing matter from mucus.

Mr. Charles Darwin, from Litchfield. P.

An experimental inquiry into the cause of the red colour of the blood.

Dr. Edward Stevens, from St. Croix.

An experimental inquiry concerning the nature and properties of the coagulable lymph, or gluten of the blood.

Dr. Edward Broughton, from Bristol.

An experimental inquiry concerning the nature and properties of the bile.

Mr. Jonathan Stokes, from Worcester.

An inquiry concerning the nature and properties of milk.

Mr. Richard Kentish, from Yorkshire.

Mr. Samuel Ferris, from Wiltshire. P.

An

An inquiry into the nature and properties of the Peruvian bark.

Mr. Ralph Irving, from Selkirkshire. P.

Mr. Thomas Skeete, from Barbadoes. P.

1784. An experimental inquiry concerning the nature and properties of Ipecacuanha.

Mr. Ralph Irving, from Selkirkshire.

1785. An inquiry concerning the nature and properties of Opium.

Mr. John Leigh, from Virginia.

An experimental inquiry into the nature and properties of the *Hyoscyamus niger* of Linnæus.

Mr. Benjamin Smith Barton, from Philadelphia.

An inquiry concerning the chemical and medical properties of those substances called Lithontriptics, and particularly their effects on human calculus.

Mr. Joseph Pinto Azeredo, from Brazil.

* * * *

At the annual meeting of the Harveian Society, on the 11th of April 1795, Dr. William

liam Brown, Fellow of the College of Surgeons of Edinburgh, read to the Society an account of the life, writings, and character of the late John Hunter, Esq. surgeon of London. Dr. Brown, in this eulogium on Mr. Hunter, did much credit to himself, both by the elegance of the composition, and by the medical erudition which it demonstrated. Without being either an enthusiastic admirer of all that Mr. Hunter has written, or anxious only to detect faults, he estimated the merit of his different publications with a high degree of discernment. He at the same time passed a just censure on those who have written lives of Mr. Hunter, apparently with no other intention but that of detracting from merit, which they are incapable either of equalling, or even of imitating.

When speaking of these malevolent defamers, among other particulars, he made the following observation.

“ His ardour of disposition, and desire of excellence, led him into several disputes with his contemporaries. The public were made arbiters of the several claims, and it is with them to award decision. His generous op-
ponents

ponents have paid, and will pay, due tribute to his abilities, while they correct his errors. Honest minds can discriminate between error and unworthiness.

To recount his weaknesses affords no satisfaction; they are not objects for our imitation; but they lose half their deformity, when exhibited by the polluted hand of Detraction."

As several different lives of Mr. Hunter have already appeared, much new information cannot be expected. We would, however, vain hope that Dr. Brown may yet present his discourse at full length to the public. The picture which he draws of Mr. Hunter may animate the exertions of future inquirers into the philosophy of nature.

* * * *

PROFESSOR REIL of Halle in Saxony has transmitted to us an advertisement of his, respecting an intended new periodical publication, of which the following is a translation from the German language.

ADVER-

ADVERTISEMENT.

I intend to publish, from the Curtischen bookfellery at Halle, an archive of phyfiology. In this publication are meant to be collected wrecks of literature which might otherwise be loft; and whatever in general may contribute to the improvement and perfection of phyfiology, which is the only fure foundation of rational practice in medicine.

Treatifes on the following fubjects will be received into this work.

1st. Chemical difquisitions concerning the component parts and mixture of organic bodies.

If the appearances of animal bodies, as is highly probable, depend upon the matter of which they are compofed; and if their refpective phenomena be the refult of a peculiar mixture of parts, chemistry, which makes us acquainted with thefe materials, muft chiefly pave the way for a rational natural philofophy of the animal body.

2^d. Treatifes on the pure or general phyfiology of animated nature, applied to animal bodies;

bodies ; juſt expoſitions of coheſions, gravity, expanſibility, and the various modifications of theſe in animal bodies.

This ſpecies of pure phyſiology ſhould afford us a ſatisfactory explanation of the efficient cauſes of the phenomena of animal bodies, from the common properties of animal matter ; and from the powers and laws according to which it produces its effects, it ought to point out to us, how they act, either by themſelves, or in combination with the power of life ; and in what manner the general powers and properties of the animal kingdom are changed and modified by the vital principle in animal bodies.

3d. Effays on the ſtructure and form of animal bodies explained upon the mechanical and mathematical principles, by which the powers of animal matter are directed, and its operations determined to the moſt proper ends.

4th. Effays on the anatomy of plants and animals, as far as it ſerves to illuſtrate the phyſiology of the animal machine.

5th. Effays on the phyſiology of plants, and of irrational animals, which by analogy can
lead

lead us to a knowledge of the physiology of the human body.

6th. Disquisitions on the power of life, its causes, determinations, modifications, and the laws by which it operates.

7th. Psychological considerations, affording a more accurate exposition of the laws by which matter is changed in consequence of the operations of the mind.

8th. Extracts, prospectuses, and reviews of physiological works, published in Germany, and elsewhere.

In this archive, I will thankfully receive, not only essays and extracts from printed books, particularly from foreign publications and periodical magazines, but also original essays contributed by my cotemporaries. But with respect to the latter, I must prescribe the following conditions.

1st. They must be transmitted to me in every instance without the name of the author. I can thus subject them to the strictest examination, whether they be conformable to the intention of my publication, without suspicion of partiality. The authors however may, if they please, after the publication of their essays,

essays, inform me of their names, which shall in that case be published in the ensuing number.

2d. I will upon no account receive groundless hypothesis, and vain disputes of physicians, upon subjects which cannot be investigated, either in our present state, or at any future period, and which are not the objects of experiment. I wish to record only matters of fact, and results which can be deduced from accurate experiments. I particularly wish, that my archives may serve to promote a more full investigation, and more accurate conception, of those laws by which animal bodies act. Solitary experiments, which have no tendency to lead us to understand the nature of animal bodies, are of no utility. We must search for the causes of their phenomena, till we trace the series to an origin which cannot be farther the object of our senses. Few philosophers have in a short space of time, by observation and reasoning, so accurately determined the rules of agency of inanimate bodies, that they can deduce consequences which on application stand the proof. But what have numberless physicians
done

cians done in so long a space of time in the physics of animal bodies? In reality, very little. And yet the operations of animal bodies follow as certain and unalterable laws; and their phenomena in similar circumstances are analogous to those occurring in inanimate nature. It is however true, that the powers of animal bodies continually undergo peculiar changes, partly by means of their inherent nature, and partly by their peculiar functions. Hence the study of the phenomena belonging to them becomes more difficult, but at the same time more interesting, and more important, to the eye of the natural philosopher.

The science of medicine is at present little more than crude empiricism, and its received theoretical, as well as practical principles, are subverted by every successive attack. We shall never establish a firm foundation for medicine, if we do not adopt this method of investigation, and try to find out the laws which direct the agency of animal bodies in health, as well as in disease. In this way only shall we acquire a general view of the phenomena of animal bodies, introduce simplicity into

physiology, and be enabled to predict phenomena in certain circumstances.

3d. I cannot give any gratuity for the articles sent me, partly because I cannot estimate the profits which may arise from the work, and partly because I must be at a great expence in procuring books, and other articles of intelligence, from foreign countries. I have no views to gain by the undertaking, but shall sell the publication at a reasonable price; and the surplus, after deducing expences, shall be applied to some benevolent purpose. I hope that every physician who loves his art, and knows its defects, will, from motives of philanthropy and patriotism, without interested considerations, strive to exert himself for the benefit of his cotemporaries and of posterity.

REIL.

Professor at Halle.

* * * *

AN Experimental Essay on Opium, by an ingenious young physician, Dr. Alexander Philip Wilson, already favourably known to the

the public by his Inquiry into the Remote Causes of Urinary Gravel, published at Edinburgh in the year 1792, is at present in the press, and will very soon be published. To the trials made with opium, are subjoined some Experiments on Tobacco. Although both these articles have frequently been the subject of investigation with ingenious men, yet our knowledge of their action still continues in many respects very imperfect; and we would fain hope that what Dr. Wilson has done will tend in some degree to elucidate this subject, and to reconcile phenomena apparently contradictory.



A SHORT but useful work on natural history, a French translation from the German of M. Raff, was published about two years ago, at Amsterdam, under the title of *Abrégé d'Histoire Naturelle pour l'instruction de la jeunesse*. Par. M. Perrault. An English translation of this work has been for some time in the press, at Edinburgh, and probably will soon be published. It will, we hope, tend not

a little to facilitate the study of a science with which no one, particularly no medical practitioner, should be unacquainted.

* * * *

MR. G. SCHMEISSER, of the Royal Societies of London and Edinburgh, well known by several valuable chemical publications during the course of last winter, which he passed in Edinburgh, translated from the German language a work intitled *Chemico-Physiological Observations on Plants*. By M. Von Ussler. This translation has been for some time in the press, at Edinburgh, and will soon be published. To the ingenious observations contained in the original, Mr. Schmeisser has made several interesting additions. We have therefore no doubt that the philosophical reader will receive much gratification from a careful perusal of this treatise in its English dress.

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SOME time ago, Dr. Roxburgh, botanist to the East India Company, on the Madras establishment,

blishment, published, under the patronage of the Company, the first number of an elegant and useful work, the Coromandel Plants. A second number of that work, under the same patronage, and under the direction of Sir Joseph Banks, will, we are told, be speedily published.

Another work is also in preparation, under the patronage of the present directors of the East India Company, by Dr. P. Ruffel, who was Dr. Roxburgh's predecessor at Madras, treating of the serpents of India, and shewing, both by experiment and anatomy, those which are poisonous, and those which are not.

MR. VON HUMBOLDT is preparing for the press, at Gottingen, a work containing physiological experiments on stimulated nerves and muscular fibres. He has now been engaged in it for the space of three years, and hopes to complete his manuscript this autumn. Mr. Von Humboldt flatters himself, we are told, that his experiments on animal electricity, as it is called, have led him to valuable hints respecting the vital powers, and the functions of the nervous system, as well as the vita pro-

pria of particular organs, and even the determination of the limits of animality.

THE insecurity of navigation, in consequence of the war, has induced Dr. Bloch of Berlin to close his Natural History of Foreign Fishes with the ninth part, which contains thirty-six coloured plates, and a triple index. He gives hopes, however, that he may resume his labours on the return of peace.

* * * *

THE following deaths of distinguished medical practitioners have lately taken place.

Dr. Thomas Clarke, one of the physicians to the army.

Dr. Hugh Alexander Kennedy, physician to the Prince of Wales, and director-general of the British hospitals on the Continent.

Dr. John Craigie, Fellow of the Royal College of Physicians of Edinburgh.

Dr. John Lorimer, physician to the army and to the East India Company, Fellow of the Royal College of Physicians of Edinburgh,

and author of an ingenious essay on magnetism.

Dr. Adair Crawford, member of the Royal College of Physicians of London, and well known to the philosophical world by his ingenious essay on animal heat, and the inflammation of combustible bodies.

Dr. Jo. Schmukius, professor in the academy at Heidelberg, a young man of whom the highest expectations were entertained.

Dr. Nat. Jo. de Necker, a celebrated botanist at Manheim, and author of several ingenious works on botany.

Dr. Cor. Just. Lud. Crell, son to the justly celebrated Professor Crell of Helmstadt, and a very ingenious young man, cut off in the twenty-second year of his age.

Dr. G. Ludov. Rousseau, professor of natural history, Materia Medica, and chemistry, at Ingolstadt.

Dr. Jo. Fr. de Paula Baader, first physician to the Elector of Bavaria.

Dr. Fr. Jo. Hoffer, professor of anatomy and surgery in the academy at Dillengen.

Dr. Pet. Lud. Spangenberg, physician to

the Duke of Mecklenburg-Schwerin, and professor of medicine at Rostock.

* * * *

THE President and Council of the Royal Society of London adjudged, for the year 1794, the medal on Sir Godfrey Copley's Donation to Sig. Aleffandro Volta, professor of experimental philosophy in the University of Pavia, for his several communications explanatory of certain experiments published by Professor Galvani.

* * * *

DR. JOSEPH BLACK, whose eminent abilities as a professor, and an improver of the science of chemistry, are too well known to the learned world, to receive celebrity from any encomium of ours ; finding that, with advancing years, the state of his health did not admit of that regular discharge of the duties of office which he reckoned necessary, intimated to the Patrons of the University of Edinburgh his intention of resigning the professorship

fessorship of chemistry. He at the same time recommended, as his successor, Dr. Thomas Charles Hope, professor of medicine at the University of Glasgow, who for several years taught chemistry with great reputation at Glasgow. In consequence of this recommendation, the Lord Provost, Magistrates, and Town Council of Edinburgh, who could not be directed by better advice than that of Dr. Black, unanimously re-elected Dr. Black to the chemical-chair, in conjunction with Dr. Hope as his assistant and successor. This election took place on the 21st of October. Dr. Black began his usual course of lectures on the 28th, and intimated to the students the new arrangement which had taken place in the University. And although the well-known abilities of his colleague give every reason to believe that the chemical-chair will continue to be ably filled, yet we trust that Dr. Black himself will yet, for many years to come, be able to undertake no inconsiderable part of the duties of his office.

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Since the publication of our last volume,
Dr.

Dr. Philip Alexander Wilson and Dr. James Buchan have been admitted Fellows of the Royal College of Physicians of Edinburgh ; Dr. James Gasking and Dr. Thomas Charles Hope have been admitted Licentiates.

Gaspar Voght, Esq. of Hamburgh ; John Godfrey Schmeißer, Esq. of Hamburgh ; Francis Humberstone Mackenzie, Esq. of Seaforth ; William Garthshore, Esq. of London ; and John Gilles, Esq. LL. D. historiographer to his Majesty for Scotland ; have been admitted Non-resident Members of the Royal Society of Edinburgh, since the publication of our last volume ; Robert Hamilton, Esq. advocate, and Dr. Alexander Philip Wilson, physician, have been admitted Resident Members.

State

* * * *

State of the Thermometer, Barometer, and Rain, during the year 1794, according to Observations made about a mile from the City of Edinburgh.

MONTH.	THERMOMETER.			BAROMETER.			RAIN.
	High. Deg.	Low. Deg.	Mid. Deg.	Highest. Inches.	Lowest. Inches.	Medium Inches.	Inches & Decimals.
Jan.	51	13	42	30.23	28.60	29.76	1.40
Feb.	52	32	47	29.85	28.95	29.23	2.14
Mar.	58	31	49	30.18	28.75	29.54	0.99
Apr.	68	42	56	30.07	28.87	29.79	2.15
May	60	45	57	30.36	29.04	29.53	1.90
June	72	55	64	30.10	29.50	29.91	1.07
July	76	52	66	30.08	29.40	29.80	2.12
Aug.	68	51	61	29.95	29.10	29.62	3.84
Sept.	62	41	53	30.20	28.67	29.55	3.14
Oct.	59	45	50	30.10	28.90	29.68	3.53
Nov.	57	37	44	29.90	28.70	29.47	4.51
Dec.	52	30	41	30.13	29.02	29.52	3.92
Whole Year. }	76	13	52	30.36	28.60	29.61	30.71

State

* * * *

State of the Thermometer, Barometer, and
Rain, during the year 1794, according to
Observations made at the Apartments of
the Royal Society of London.

MONTH.	THERMOMETER.			BAROMETER.			RAIN.
	High. Deg.	Low. Deg.	Med. Deg.	Highest. Inches.	Lowest. Inches.	Medium Inches.	
Jan.	50	22	35	30.56	28.75	30.03	0.403
Feb.	56	36	47	30.29	29.40	29.85	0.655
Mar.	56	36	46	30.46	29.50	29.98	1.077
Apr.	71	38	52	30.44	28.98	29.90	1.396
May	71	43	54	30.58	29.43	29.96	2.215
June	79	48	61	30.34	29.70	30.03	0.385
July	84	57	69	30.37	29.47	29.99	0.515
Aug.	77	52	63	30.28	29.51	29.91	1.605
Sept.	67	39	56	30.36	29.24	29.85	3.012
Oct.	63	36	50	30.34	29.34	29.81	2.842
Nov.	56	31	45	30.19	29.11	29.73	3.340
Dec.	51	27	38	30.44	29.49	29.94	1.021
Whole Year. }	84	22	51	30.58	28.75	29.91	18.466

SECT:

S E C T. IV.

LIST OF NEW BOOKS.

PHILOSOPHICAL Transactions of the Royal Society of London for 1794. 4to, London.

An Anatomical Description of the Human Gravid Uterus, and its Contents. By the late William Hunter, M. D. physician extraordinary to the Queen, professor of anatomy in the Royal Academy, and Fellow of the Royal and Antiquarian Societies, London. 4to, London.

Transactions of the Royal Humane Society, from 1774 to 1794. By William Hawes, M. D. 8vo, London.

Transactions

Transactions of the American Philosophical Society at Philadelphia. Vol. III. 4to, Philadelphia.

Transactions of the Linnæan Society. Vol. II. 4to, London.

Memoirs of Science and the Arts, selected from the transactions of various societies. Vol. II. 4to, London.

Observations on the Seats and Causes of Diseases, illustrated by the dissections of the late Professor Morgagni of Padua. By James Hamilton jun. M. D. Fellow of the Royal College of Physicians of Edinburgh. Vol. I. 8vo, Edinburgh.

Select Cases in Midwifery, extracted from the records of the Edinburgh General Lying-in Hospital, with remarks by James Hamilton jun. M. D. assistant physician to the Hospital, and Fellow of the Royal College of Physicians of Edinburgh. 8vo, Edinburgh.

An Inquiry into the History, Nature, Causes, and different Modes of Treatment hitherto pursued in the cure of Scrophula and Cancer. By William Nisbet, M. D. Fellow of the Royal College of Surgeons, Edinburgh. 8vo, Edinburgh.

An

An Essay on the Causes and Phenomena of Animal Life. By John Herdman, Member of the Medical Society Edinburgh, and Surgeon Leith. 8vo, Edinburgh.

Engravings explaining the Anatomy of the Bones, Muscles, and Joints. By J. Bell, Surgeon: 4to. Edinburgh.

A Treatise on Sol-lunar Influence in Fevers, &c. By Francis Balfour. The second edition, corrected and enlarged. Vol. I. 8vo, London.

A Practical Essay on a certain Disease of the Bones, termed Necrosis, illustrated with six plates. By James Russell, F. R. S. Edin. Fellow of the Royal College of Surgeons, and one of the surgeons to the Royal Infirmary of Edinburgh. 8vo, Edinburgh.

An Essay on the Malignant Pestilential Fever, introduced into the West Indian islands from Boullam on the coast of Guinea, as it appeared in the years 1793 and 1794. By C. Chisholm, M. D. surgeon to his Majesty's ordnance in Grenada. 8vo, London.

Observations Anatomical, Physiological, and Pathological, on the Pulmonary System, with Remarks on some of the Diseases of the Lungs.

Lungs. By William Davidfon. 8vo, London.

Medical Extracts, being a concentrated View of some of the late Discoveries in Chemistry, and the new Theory and Practice of Physic thereby introduced. By a Friend to Improvements. 8vo, London.

A Description of the Jail-Distemper, as it appeared among the Spanish prisoners at Winchester in the year 1780, with an Account of the Means employed for curing that Fever, and for destroying the contagion which gave rise to it. By James Carmichael Smyth, M. D. F. R. S. Fellow of the Royal College of Physicians, and physician extraordinary to his Majesty. 8vo, London.

A second Differtation on Fever, containing the History and Method of Treatment of a Regular Tertian Intermittent. By George Fordyce, M. D. F. R. S. senior physician to St. Thomas's Hospital, and reader on the practice of physic in London. 8vo, London.

The Guide to Health. By the Reverend J. Townshend. 8vo, London.

History of Two Cases of Ulcerated Cancers of the Mamma. By J. Ewart, M. D.

Observations Physiological and Chirurgical. By W. Weldon. 8vo, London.

Experimental Researches on the Philosophy of Permanent Colours. By E. Bancroft, M. D. 8vo, London.

An Essay on Combustion. By Mrs. Fulhame. 8vo, London.

Summary of the Pneumato-chemical Theory. By R. White, M. D. 8vo, London.

Lectures on Electricity. By G. C. Morgan. 2 vols 8vo, London.

Lectures on Experimental and Natural Philosophy. By G. Adams. Five vols 8vo, London.

Rules for recovering persons recently drowned. By R. Hamilton, M. D. 8vo, London.

Essays Physiological and Practical. By F. Penrose, M. D. 8vo, London.

Letters to Dr. Quin on the Dropsy of the Brain. By William Paterfon, M. D. 8vo, London.

An Inquiry into the abuses of the medical department in the militia. By H. Moises. 8vo, London.

Method of Treating those Affections which
arise

arise from the poison of lead. By H. Clutterbuck. 8vo, London.

An Essay on the Rhus Toxicodendron, or Sumach. By J. Alderson, M. D. 8vo, London.

Practical Observations on the effects of certain medicines in the prevention and cure of diseases. By R. Shannon, M. D. 8vo, London.

Observations on the Ventilation of Rooms, Chimneys, &c. By J. Whitehurst. 8vo, London.

A Treatise on Magnetism. By R. Walker of Jamaica. 8vo, London.

The Works of Professor Camper, on the Connection between Anatomy and Drawing. Translated by Dr. Cogan. 4to, London.

Supplement to Medical Botany. By J. Woodville, M. D. 8vo, London:

Plants of the coast of Coromandel, from the drawings of Dr. Roxburgh, containing twenty-five plates, and descriptions. 4to, London.

The Naturalist's Calender, from the papers of Mr. White. By Dr. Aikin. 8vo, London.

Systematic Arrangement of Minerals. By William Babington. 4to, London.

Observations on the Genus Mesembryanthemum. By A. H. Haworth. 8vo, London.

The causes which have prevented success in the operation of extracting the catenut. By J. Ware. 8vo, London.

Observations on Morbid Poisons and Cancer By J. Adams 8vo, London.

A Practical System of Surgery. By James Latta. 3 vols 8vo, Edinburgh.

A Popular View of the Effects of the Venereal Disease on the constitution. 8vo, London.

A View of the Establishment of Physic in England. By S. Ferris, M. D. 8vo, London.

The Harveian Oration before the College of Physicians. By Dr. Latham. 8vo, London.

Medical and Chemical Essays. By T. Trotter, M. D. 8vo, London.

Letter to the Officers of the Army under orders for, or that may hereafter be sent to, the West Indies, on the means of preventing
that

that fatal disease, the yellow fever. By S. Henderson, surgeon to his Majesty's 40th regiment of foot. 8vo, London.

Essays Physiological and Medical. By C. Kite. 8vo, London.

On the Puerperal Fever of Aberdeen. By A. Gordon, M. D. 8vo, London.

Medical Essays and Observations. By J. Johnstone, M. D. 8vo, London.

An Inquiry into the Suspension of vital actions in drowning. By A. Fothergill, M. D. 8vo, London.

An Essay on the diseases of prisons and poor-houses. By J. M. Good. 8vo, London.

Account of the different kinds of Air, so far as relates to their medical use. By R. Pearson, M. D. 8vo, London.

A Dictionary of Chemistry. By W. Nicholson. 2 vols 4to, London.

Tabula Nosologica. 8vo, London.

A Dissertation on the Philosophy of Light, Heat, and Fire. By J. Hutton, M. D. 8vo, London.

Letters of Euler, to a German Princess, on

Physics and Philosophy, translated from the French, by H. Hunter, D. D. with notes. 2 vols 8vo, London.

Minutes of the Society for Philosophical Experiments. By B. Higgins, editor. 8vo, London.

The Antiphlogistic Doctrine of Lavoisier examined by E. Peart, M. D. 8vo, London.

A Complete Treatise on Electricity. By T. Cavallo. 3 vols, 8vo, London.

A new edition of Kirwan's Mineralogy. Vol 1. 8vo, London.

A Concise Essay on Magnetism. By J. Lorimer, M. D. 8vo, London.

The Philosophy of Chemistry, or Fundamental Truths of modern Chemical Science, arranged in a new order. By A. F. Fourcroy, translated from the French of the second edition, signed by the author. 8vo, London.

Discourses on the nature and cure of Wounds. By John Bell, surgeon. 8vo, Edinburgh.

A new method of operating for the Femoral Hernia, translated from the Spanish of
Don

Don Antonio de Gimbernat, surgeon to the King of Spain, with plates; to which are added, by the translator, Queries respecting a safer method of performing Innoculation, and the treatment of certain Fevers. 8vo, London

Considerations on the medicinal use and the production of Factitious Airs, second edition; with Communications from Drs. Carmichael, Darwin, Ewart, Ferrier, and others. 8vo, London.

Experiments on Insensible Perspiration. By William Cruickshank. 8vo, London.

Beytragen zur gerichtlichen Arzneygelahrheit, und zur medicinischen Polizey, *i. e.* Collections relative to Medical Jurisprudence and Police. By W. H. Bucholz, physician to the Duke of Saxe-Weimar. 3 vols 8vo.

Versuch einer allgemeinen Geschichte des Keischustens, *i. e.* An Essay towards a general history of the Chincough. By F. G. Danz, demonstrator of anatomy at Gießen. 8vo, Marburg.

Lehrsatze der medicinischer Polizey-wissenschaft,

fenschaft, *i. e.* Principles of Medical Police. By Erm. G. Hebenstreit, M. D. professor of physic at Leipzig. 8vo, Leipzig.

Annalen des Klinischen Instituts zu Berlin, *i. e.* Annals of the Clinical Institution at Berlin. By J. F. Frize, M. D. 8vo, Berlin.

Vom Baue des Menschlichen Körpers, *i. e.* Of the structure of the Human Body. By S. T. Soemmering, M. D. and P. 8vo, Frankfurt.

Ueber der Gebrauch und die Krafte der Sauren Schwererde in verschiedenen Krankheiten, *i. e.* On the use and effects of Muriated Barytes in different diseases. By C. W. Hufeland, M. D. physician to the Duke of Saxe-Weimar. 4to, Erfurt.

Ueber die Natur und den Gebrauch der Bader, *i. e.* On the nature and use of Baths. By H. M. Marcard, physician to the Duke of Holstein Oldenburg. 8vo, Hanover.

Botanisches Bilderbuch, für die Jugend und Freunde der Pflanzenkunde, *i. e.* Botanical Figures for the young, and for the lovers of Botanical Knowledge. By Frederick Dreves. 4to, Leipzig.

Beytrag

Beytrag zur Geschichte epidemischer Gallen Fieber, *i. e.* Materials for a history of an epidemic Bilious Fever. By Charles Christ Eckner, M. D. physician to the garrison of Schwarzbourgh-Rudolstadt. 4to, Leipzig.

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